FOGHORN

THE MONTHLY CP/M PUBLICATION OF **FOG**

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FROM THE FOG

Welcome to the Faire

by Frank Morton

mce again it is time for the West Coast Computer Faire. It is d to believe that it has been five years already since Adam st showed his prototypes at the 1981 Faire! This year is the th in the series of West Coast Computer Faires. It has been pied and changed, but it is still the granddaddy of them all. Like last year, the Faire is being held at the San Francisco oscone Center. It is located in downtown San Francisco outh of Market Street between Third and Fourth Streets. Al- hough it probably is not as large as the former site of Brooks Hall and the Civic Auditorium combined, it does have the con- venience of putting everything under one roof.

The Faire dates are April 3 through 6. This means that the Faire is returning to the original format of Thursday through Sunday. That should help increase gate attendance over that of last year.

The location of the FOG booth will be booth number 935. So if you can make it to the Faire, stop by and see us! In fact, if you have some time, stay a while and help out at the booth and/or help us recruit some new members. Unless we get an additional booth (probably unlikely), CP/M, MS-DOS, and other operating systems will all be represented at the one site. I imagine we will have a wide variety of machines there from the FOG office.

Since our annual meeting will have already been held on March 22, there will not be any FOG meeting or guest speaker at the Faire this year. This will allow you more time to enjoy the Faire and the bargains that traditionally are offered there.

Also, by the time of the Faire the election returns will be known. However, the new Officers of FOG will not be chosen until the April Board meeting later in the month. I suspect many of the Board members will be there at the booth. So it will be a good opportunity to meet many of the Board members as well as the FOG staff, if you have not already had a chance to do so.

It will also be a good opportunity to give us your personal comments and feedback on any subjects that are of interest to you. Of course many of the products we offer (such as FOG T-shirts, etc.) will be available for purchase at our booth.

Last year there was an attempt to have a PRACSA meeting for SYSOPs that never quite happened. We may make another attempt this year to see if we can have such a meeting. In any case, we have a lot more FOG SYSOPs this year and this may also be a good chance to meet in person those you have only met electronically on the Bulletin Boards. The FOG SYSOPs are a great bunch of people who are working hard to make FOG and its library more accessible to you.

Speaking of the Election, you did vote this year — didn't you? If not, why not? If you did vote, we appreciate your participation and thank you for exercising your democratic right as an active member of the Corporation.

I have one last request. I would like to receive your comments about this column.

I have tried my best to make you aware of what is happening in FOG, and to inspire your participation and/or your comments about what you expect from FOG. We greatly appreciate your response to the questionnaire in the January ***FOGHORN***. It will help our Long Range Planning Committee to perform its job in recommending to the Board courses of future action.

To reach me directly with comments about this column you can see me at the Faire. I can also be reached through FOG RBBS #5 or by writing me directly at the FOG Office or:

Frank Morton
P.O. Box 60027
Palo Alto, CA 94306-0027

Your inputs, favorable or otherwise, will be quite welcome.

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CORRECTION

FOG's Faire Booth Number

FOG will have booth **#935** at the West Coast Computer Faire this month, not booth #435 as reported in last month's issue.

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*Please let **FOG** know of any difficulties encountered. Send all details, **In writing**, to the **FOG** office at P. O. Box 3474, Daly City, CA, 94015-0474, U.S.A.. We can't promise a solution, but we will try to help.*

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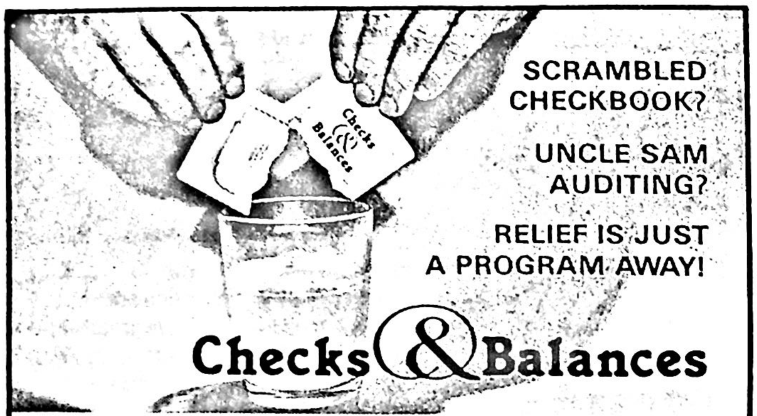

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LETTERS

MS-DOS and Some Comments and Suggestions

I heartily welcome the MS-DOS/PC-DOS section. I use 8-bit /M computers myself so far, but I can see the time (far in future?) when I shall have to move on to 16-bit computers. it is nice to know that when the time comes, I will still get nderful information and support from my own group.

Now I wish to offer comments on the November 1985 *GHORN*. Ed Buttenhoff's note on giving your files identical ames and varying the extensions, which only produces one AK file, was not new to me, but while trying to help a new aypro 2X owner (a former O-1 owner), I noticed to my surrise that some other people here in Finland did not know it.

It seems to me that there should be a **NOVICE NOTES** section m every ***FOGHORN*** which would provide the membership at arge with simple, elementary tricks of the trade, if you wish, and to REPEAT them every once in a while. *[It is a worthwhile investment for newcomers to purchase all the **FOGHORN** back issues for just this info. Jack]*

To W. D. Gregory, I experienced a similar bug in my dBASE II version 2.41 on my Kaypro 10 and Star Gemini 10X printer. It simply would not work with the @ **X,Y SAY** command when the X exceeded 120. I have submitted the problem with a partial solution in a separate article.

To James McCollum with a Star Gemini problem of default pitch, why not simply use INSTALL (or WINSTALL, if version 3.3). It should work. At least it has with me when I simply used INSTALL to produce 17cpi as the default pitch and 10cpi as the alternate.

You can also use the **^PA** as the command to switch to an alternate print character set, e.g, my default set is Finnish, and the alternate is USASCII. This, however, means that I lose the ability to vary pitches, but that can be done with an external public domain program very well.

To J. M. Janules, why don't you reset your help level or enlarge the delays, then you should not be bothered by your increased WS speed.

Bart Hickman complained about not being able to use SETUP or NSWEEP even after having had the computer for over a year. I do not know about the Exec, but when I bought my O-1, the SETUP procedure was very well explained in the manual.

I had never even heard about anything called SETUP or even CP/M, but within 15 minutes I was defining and redefining SFKs to my heart's content. It was so EASY!

And NSWEEP is even simpler. Just load it with **NSWEEP**↵ and the menu is always right there. If not simply press the **?** key. There is also a very comprehensive manual for using NSWEEP — it should be in BBS libraries. *[Complete documentation is also on the FOG starter disk. Jack]*

I recently read an interview of one of Finland's bulletin board SYSOPs, and he said that when people buy computers, they should also learn how to use them. I do not entirely share all his views, but it seems to me that one year should be ample time to learn to define function keys and use NSWEEP. If you have learnt WordStar, you will also learn SETUP and NSWEEP.

As to Ari Feldman's suggestion that you might rename some program SPELSTAR.COM (or rather, as M. Blake pointed out, SPELSTAR.OVR), this can be done with the WORD PLUS, obviously with SORT.COM, but, e.g., NSWEEP will not work. David suggested using EDFILE to change WS so that it would look for SORT.COM instead of SPELSTAR.OVR, but I, at least, did not find the correct location in WS with EDFILE.

In one of the Finnish BBS systems I noticed that in some computers in some cases it is possible to nest `DO CASE` and `DO WHILE` statements in dBASE II. I haven't tried it out myself yet, but feel free to experiment.

Veikko Rekunen
Finland

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Other Uses for Drive C Utilities

I would like to comment on a subject I have not seen addressed, namely; other uses for Drive C utilities. I have "patched" the Osborne AUTOST.COM to call up my dBASE II or SuperCalc files but that is a lot of work.

There is an easy way for those of us who have Drive C.

Drive C's AUTOST.COM calls up a submit file named DCQ.DAT. Now this DCQ.DAT file is simply a list of commands as if you had entered them by hand from the `<A` prompt. This file then can be written or modified from WordStar's Non-document mode.

A sample DCQ.DAT file is as follows:

`DCQ.DAT command line`	(My comments not part of the file)
`;Now loading Drive C`	Comment line preceded with ;
`DCL P`	Loads Drive C and print buffer
`DCQ N C + A:WS`	Names Drive C and loads WordStar
`ERA B:*.BAK`	Erases .BAK files after exiting WS

A DCQ.DAT file could be used with Drive C's AUTOST.COM even though you don't have your Drive C plugged in or if you are using your computer at home while your Drive C is at work. Typing command lines from WordStar is much easier than some of the DDT or other methods of modifying the internal workings of COM files.

[We know the author's initials are W.A.P. but unfortunately deleted the full name. We'll give you acknowledgement in a future issue if you care to let us know. Joanne]

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Help Needed with Reverse Video and Fast Scrolling, Printing, Characters for Other Languages and Fonts 1.) I tried the patch for the WordStar Memory Mapped Video/Fast Scroll/Reverse Video in the August 1985 ***FOGHORN***, page 56, along with the corrections listed in the September 1985 issue, page 5.

It seemed to work for a while on my Osborne Executive with an early ROM chip and BIOS 1.1 but then either something went wrong or else I finally noticed that the **^N** (control N) function (inserting a blank line) didn't work: it moves the current line of text down one space, but only by erasing the text which was previously there. At the same time the rest of the text located further down does not budge.

More or less the same thing happens when I do **^W** to scroll downward line by line. A **^C** or **^R** which moves me down or up a screen, plus a reverse **^R** or **^C** which moves me back to the starting point, produces a text which is now OK, including the blank line I wanted to insert!

In the meantime I traded in my old Exec for a new one with BIOS 1.2 and the new ROM, but the problem has remained. This problem stays that way even if I try the patch on the original WS.COM without any other patches.

Help! I love the reverse video and fast scrolling and want it back.

2.) I hooked my Osborne Executive up to a Brother HR-15, and I write using a French print wheel. The pin connections for the RS-232C are:

Osborne Exec Brother HR-15
1 ------------ 1 (grounded)
2 ------------ 2
3 ------------ 3
4 & 20 ------- 20
7 ------------ 7 (grounded)
4, 5, 6, & 8 all hooked together

Using the French wheel at 1200 baud my dip switches are:

DIPS 1		DIPS 2	
1	down	1	down
2	down	2	down
3	up	3	up
4	up	4	down
5	down	5	down
6	down	6	up
7	down	7	up
8	down	8	down

This is a great printer, although I wish the instruction manual were more complete. I have a SFK setup for my keyboard which allows me to use the Executive as a typewriter with the TYPER command available from the FOG library (FOG/EX1.012) while also having the possibility to backspace, roll the paper up and down, and use the correction ribbon.

3.) I have developed a method for writing Polish characters on this printer, which involves automatic backspacing plus partial superscript and subscript rolls. It is quite passable.

4.) I have also developed a set of letter forms using CHARGEN which are definitely easier to read from the screen than the font which came with my first Executive, and more pleasing than that which came with my newer Exec.

The object of this font is to improve legibility in both a practical and esthetic sense. This font's underlying principles are expressed in an article in the January 1985 ***BYTE***, Vol. 10, No. 1, entitled *Font Design for Personal Workstations*, by Charles Bigelow.

Anyone interested in pursuing the technical-esthetic aspects of this or any other font design can refer to the article *Digital Topography* in the August 1983 ***SCIENTIFIC AMERICAN***, written by Charles Bigelow and Donald Day.

I am neither a font designer nor a graphic artist. However, in the late 1960's, I had the pleasure of attending Reed College, in Portland, Oregon, along with Mr. Bigelow and Mr. Day, where a certain Lloyd Reynolds taught courses in art history and calligraphy. I was fortunate enough to be able to enroll in some of his courses, along with such gifted individuals as Messrs. Bigelow and Day.

I have extended this font to include the French alphabet when I write in French. Sadly, I have not yet figured out how to have umlauts and circumflexes appear on the screen and take up only one place instead of two. This would be possible by rearranging the internal Exec code for the SFK's, and then using an 8-bit language provided by the Brother HR-15, but I can't figure it out.

Keep up the good work. Anyone wishing info on the material I have mentioned above, or who can help me with the problem I mentioned, can contact me at the address given below. I will send a disk to the library with the fonts for French and English, and SFK's for writing directly using the Brother.

Lance Montauk
105 Ave. Mozart, Bte. 4
1190 Bruxelles
Belgium
(02) 347-53-22

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WordPac Update for the Executive?

I bought WordPac a long time ago, without realizing that Footnote, Math* and Grammatik wouldn't work on the Osborne Exec with CP/M Plus. Are there any updates for my machine?

Leslie A. Bradshaw
Rochester, NY

[It isn't the Executive that is the problem, it is your version of WordStar. All these programs were designed to work ONLY with version 2.26 of WordStar, and WS 3.0 is packaged with the Exec! Jack]

[Some other extra info: Math is available from Force 2 Ltd, 9932 Courthouse Woods Ct., Vienna, VA 22180; Grammatik from Digital Marketing, 2363 Boulevard Circle Ste 6, Walnut Creek, CA 94595, (415) 947-1000 and Footnote from Pro/Tem, same address as Digital Marketing. Joanne]*

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Vocabulary Building-Programs for Children

I am interested in getting a vocabulary-building program for my 13 year old. I would also be interested in any programs designed to prepare students for the SAT or other standard tests.

Any assistance will be appreciated.

Hoke Peacock
Beaumont, TX

[We don't really have anything suitable. Maybe the members can help out. Ed]

* * * * * * *

Trifocal Glasses and the Computer Screen, Two Column Printing, Personalizing WordStar Messages, and Thanks

A letter from Frances M. Sullivan in the November 1985 ***FOGHORN*** offered a solution to the problem of trifocal glasses and the computer screen.

I have been forced to use trifocal lens for over 20 years and am well aware of the problems they present and the computer screen is not the least of them.

This type problem was first encountered trying to read name tags while manning a trade show booth shortly after joining the trifocal society.

At that time the price of the progressive power lens was out of reach, so I had a set of lens made that appear to be bifocals with the lower half the normal reading bifocal and the top half is the trifocal intermediate lens.

This setup permitted me to read name tags five to six feet away and still be able to read the business card when needed.

Later when I started with the computer these proved to be the perfect lens and at less than a third the price of the progressive power lens.

Now I have no problem reading the material that is being typed into the computer and viewing the screen to make sure I hit the right key.

Two Column Printing

I would like to suggest that the problem of two column printing of WordStar files is much more easily done by the use of the Public Domain program DBL.COM (I submitted to the FOG Library configured for WS and the Ozzie over a year ago).

The one limitation on the use of DBL.COM is that the text has to be typed with justification off and that no soft hyphens be used when the text is formatted. If this is done there is no problem in editing the full line of text after the doubling has been done.

Personalizing WordStar Messages

For those members who plan to personalize the WordStar messages as suggested by Bill Staley's article in the December ***FOGHORN***, (page 61), let me suggest the use of EDFILE (on FOG/CPM.020) instead of DU-V8.6.

EDFILE is a full screen editor for disk files and entries are typed directly to the desired location. This procedure is demonstrated in an article titled *Using WordStar with Anycode* that has been submitted to the ***FOGHORN*** for publication. In this article the printer menu is changed to show the codes used for the printer rather than the control codes used by WS.

Thanks to Jack Brown and Some Comments on the Library

I would like to commend and thank Jack Brown for the work he is doing to revive the FOG Library. When he completes the work it should be second to none.

In addition I wish he would include to make life much easier for me and the other local group Librarians as well as for those who want to download individual programs from the RCP/M's and that put all related files on each disk in the .LBR form.

As it is a slow typist like me could spend as much time typing the send and receive commands as it takes to transmit the file.

Jerry Boyce
LOGIC Librarian
Charlotte, NC

* * * * * * *

Searching for a Public Domain Health Program

Thank you for a great publication. I am looking forward to subscribing to ***FOGLIGHT*** for my MS-DOS machines.

Does anyone out there, (if there is anyone out there!) know about a public domain computerized Health Risk Appraisal (HRA) program written by the Centers for Disease Control and adapted by the National Health Screening Council for Volunteer Organizations (NHSCVO)? This program is an adapted version of the HRA program written for the Kaypro II and runs under MBASIC interpreter.

Since the available RAM on the Kaypro II is about 3-4K larger that on the Osborne 1 or Vixen, the program had to be adapted to run on Osbornes.

I have the original Kaypro II version but when it is run CP/M kicks out a message (`file too big . . .`) and aborts.

I have tried to get the program from NHSCVO in Maryland, but the organization is now defunct.

If anyone knows anything about this program, please write me:

Dr. Gregory Smith
Chief, Preventive Medicine Activity
Nuernberg MEDDAC
APO NY 09105
(regular US postage)

Thank you.

* * * * * * *

Want Library Copies?

Please refer to the **FOG MEMBER MERCHANDISE** in this issue or to the ***FOG Membership Information*** brochure sent to all members for information on obtaining copies of the disk library if you are unable to attend meetings of a local group. If you need a file in a hurry and have a modem, check the **FOG FONES** for the number of the **FOG** RBBS-RCP/M systems.

* * * * * * *

Comments on FOG Library Files

I'd like to reply to Jerry Boyce's comments about .LBR files being put onto FOG library disks.

Most beginners don't understand how to use or extract files from a .LBR file (and some old timers are not too sure either!).

It would be simple if every user had a local group to go to for help, but many of our members are far from anyone else with any computer smarts.

In order to make the FOG library programs available to every level of user, we have decided not to include any .LBR files in the FOG library, and to keep all squeezed files to a minimum.

The RCP/M systems contain each FOG library disk as a .LBR file to keep the whole disk series together, and with the new batch mode of IMP and KMD communications software, it is much easier to transfer groups of files.

With the library reorganization, new programs are being released at a much more reasonable rate, but, for various reasons, not everything received by the office is put into the library. These orphan files are available on the RCP/M systems, and are usually being held for testing or for more documentation before being released. FOG system #6 is becoming the new repository for these files.

We try to test all FOG library releases to some extent to make sure they work as promised and will not damage your system. Members have overwhelmingly supported this move, even if it means some programs are delayed before being released.

And sometimes we make mistakes, and things are lost. Sorry about that! When we find an infallible librarian who is a perfect human being, he/she can go on the payroll immediately!

If anyone else has any comments on the FOG library organization that will improve it or make it easier to use, feel free to let the office know by modem or by mail.

This is YOUR organization . . . Let's hear what you have to say.

Jack Brown
FOG Technical Support

• • • • • • •

The Missing Link to a SuperCalc Problem

My SuperCalc problem as described in my letter published in the December 1985 ***FOGHORN*** (that the **&** does not suspend reading of the eXecute file when it is used immediately after **/**) is now solved.

The missing link was found in an article by W. M. Loring in the February 1985 ***FOGHORN***, p. 47. He begins with:

=A1 (to move the cursor to the *load* position)

I can find nothing in the documentation available to tell me that this is a desirable or necessary condition, but it certainly cleared my problem.

Below is the complete program. The blank lines probably are unnecessary, but I left them in to indicate how much space it took to insert a clumsy interrupt method needed to hold up the program while the disk drives were spinning.

I seem to be doing the same thing Mr. Loring is doing. Of course, I prefer my method. I have added some more notes (for Mr. Loring's benefit) as my "thank you" for solving (inadvertently?) my problem.

A successful eXecute file.

```
/LB:SVB,A

=A1

/MR12,24
/MR15,16
/MR20,21
/CA25:S25
A24,V
=A25
/E
```

Rows 11, 16, 21 and 26 are blank; they serve as delimiters for the calculation for 4, 8, and 12-week averages.

All other formulas use values found in Row 25. Current values will be overwritten to this row immediately after running the above program. Then recalculate: "!".

```
WRL6/27/85

          BEFORE                        AFTER
      A             B              A             B
11
12    9/27        123.50         10/ 4        123.50
13   10/ 4        123.50         10/11        125.62
14   10/11        125.62         10/18        127.62
15   10/18        127.62         10/25        128.00
16
17   10/25        128.00         11/01        130.87
18   11/01        130.87         11/08        132.50
19   11/08        132.50         11/15        136.75
20   11/15        136.75         11/29        139.75
21
22   11/22        139.25         11/22        139.25
23   11/29        139.75         12/ 6        141.75
24   12/ 6        141.75         12/13        150.25
25   12/13        150.25         12/13        150.25
26
27 AVG L4         141.55        AVG L4        141.55
28 AVG L8         137.39        AVG L8        137.39
29 AVG 12         133.28        AVG 12        133.28
30
```

The columns on the left show the first two columns of a file before the XQT program has been run and those on the right show them after the XQT has been run. The cursor is in position to start entering new data in Row 25. My file keeps a 12 week record of closing stock prices. Thirteen week old data is discarded by simply overwriting it with one week old data. Formula references are stripped from the latter by using the `Copy, Values only` routine.

W. R. Lundry
Red Bank, NJ

• • • • • • •

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Programming in Other Languages, Titling Files and Questions

A few things.

(i) While I am grateful for all the good public domain programs and programmers, I still suspect that those good-hearted friends of us kids mostly have in their minds other program code writers, and they kinda forget us common writers, editors and authors, who use WordStar in the D-mode.

The Kaypro videos are all emulating ADM-3A, and the command to send the cursor home is 1Eh. So it goes with the 0-1, too: 1Eh or ^^ (i.e. control ^) moves the cursor up to left corner of the screen.

Why is it that I who am not an expert is more than well aware of that simple fact?

Because 1Eh makes her appearance rather often. The 1Eh happens to be the soft hyphen character in our beloved WordStar, and consequently an excellent program like NSWP207, when (**V**)iewing a TXT-file makes the screen go rather messy every time there is a soft hyphen in the text. *[Thanks Arto; I always wondered what caused that. David]*

English is an asyntactic language, so we don't need soft hyphens that often. But in other Indo-European languages the words are longer, (not to mention the Finno-Ugrian Finnish), and so viewing with NSWP207 is rather inconvenient. Unfortunately.

Likewise clever and practical PD-programs like FIND or FFYNDE or GRAB are nearly impossible to use for that same simple reason: the lack at 1Eh-filter.

In DISK+ I managed to write a filter to rip off the 1Eh. It's truly ugly: I worked for that for two whole days, so now I modestly ask for some knowing assembler to write us a small 1Eh-filter, so we'll be able to patch that in ASM and MAC files. And dear Dave Rand, please, when writing a new version of NSWP, remember us WordStar Document Mode writers, and I'll send you a third donation.

(ii) There are a lot of CP/M enthusiasts around the world: people writing in languages other than English where 5Bh, 5Ch, 5Dh and 7Bh, 7Ch, 7Dh are standard values for certain quite common characters, such as those with two dots over an **a** or **o**, or a comma in **c**, etc.

Consequently it always makes me glad to see an American program just using those good old parenthesis "(" and ")", and the exclamation point as a vertical bar. Or just a space. Simple is beautiful.

EDFILE is a nice program, but sometimes I'd rather use the PATCH program supplied with my Kaypro. And now a question to patch PATCH to make it a little more readable: can anyone, please, explain how to patch the 7Ch around the menus and between the columns to some other character?

(iii) We all have genial ways to give titles to the files, so we never really remember what was where.

But one of my systems really works, and maybe you'll like to try it. It focuses on extensions — those three characters after the point.

When I see GALE.L57, I guess, it must be a (L)etter I wrote to Gale Anno Domini 198(5), in July, which happens to be the

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Here are a few special characters which have been designed for the Epson and several other printers:
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7th month in our Julian calendar.

OK, and POEMGEN.E4B must be an (E)ssay I wrote in November 1984, as November is the month numbered 11d or Bh.

This system — plus the wild cards — help me a lot in general memorizing, but is especially useful when building LBRies with NULU11, making universal searches with FindMaster, or mass copying with NSWP207.

(iv) When writing with WordStar, my most used function key is **^C^QP**. Try it! And after working for more than three years with CP/M, I recently invented a Super Function Key with two marks: a colon and a <RETURN>. In other words **:^M**.

I love my Kaypro 10 and 0-1: often enough they remind me I'm just a stupid homo "sapiens".

Arto Kytohonka
Finland

* * * * * * *

From a Typewriter to Four Osbornes

Greetings from South Asia. I trust all is well. For more than a year I have benefited from ***FOGHORN*** and the help of FOG. You have especially been helpful to me since there is no local users group to lean on.

For some time I have been thinking about writing to share something about a program called Superfile (and its upgrade big brother, FYI 3000) which has been such a fantastic help to me. See the software review on Superfile, part of a writer's dream package in this issue.

It was in 1982, while browsing through an airline magazine on a flight from Albany to New York City, that I first saw the strange ad picturing three oddly posed characters looking at a woman carrying a sewing machine. No, at second glance it wasn't a sewing machine. The headline on the ad proclaimed that this was "the $1795 personal business computer that is changing the way people go to work".

It was, of course, the computer which bore Adam Osborne's name.

In what I learned later was typical immodesty for Osborne, the ad said: "Henry Ford revolutionized personal transportation. Adam Osborne has done the same for personal business computing". Of course, there is a sense in which he did just that.

Anyway, there was no other portable computer at that time with that price tag so I cut the ad out and in a few days dropped into a Xerox computer center to look one over.

Very soon, one of those sewing machine-looking things was sitting at my desk and I began to learn firsthand the truth of the ad blurb that "the Osborne is easy to learn, fun to use, and quickly becomes indispensable".

Indeed, it does.

I am a Baptist missionary and a Christian writer with a publishing ministry in North America and South Asia.

Once upon a time I owned three things related to this work— one, a typewriter, two, a reference system for my library composed of thousands of index cards, and three, a Funk & Wagnalls' dictionary.

And how I used those tools! We have printed more than 40 books in the past few years, plus publish a monthly magazine.

But there were many drawbacks to these tools. The typewriter, for example. The manuscript for just one book I have written is almost 1000 pages. I typed and retyped and retyped that manuscript as changes were made.

And that's just one book.

Then there was the index system. It was fine as far as it could go, but there were serious handicaps. First, the cards only referenced the materials. From the card I had to locate the particular book or magazine and physically copy by hand or typewriter whatever I wanted to use in writing.

Also the card system was entirely non-portable; even if I did want to lug the 10 or so big boxes of index cards with me on a trip, I still wouldn't have the library which stood behind the cards, so it was useless unless I was actually at home.

The dictionary wasn't so bad, but again, the particular word had to be looked up and entered into a manuscript physically and the manuscript retyped with each change, etc. I get tired just thinking back on it all!

I'm so glad all of that is in the past.

I now own four Osbornes — I thought if one is good four would have to be great!

No, I don't collect them, nor do I have eight arms like some of the idols here in South Asia. I use the computers with our missionary work. Two I use myself — one for general purpose writing, accounting, etc., and the other strictly for the filing system we have developed to replace the index cards. The two other machines are used by coworkers in the ministry. Two of these are Osborne 1s, one an Executive, and one the Vixen.

The article I have included covers my comments on using Superfile.

David Cloud
Brooksville, FL

* * * * * * *

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NOVICE NOTES

The first steps for those starting out.

More on Mailing Labels

by Bert Harvey

The newsletter from the Kaypro Fort Collins user group, ***K BYTE***, is always full of great suggestions. Once again mailing labels were discussed, this time using MailMerge in WordStar. A data file — NAMES.DTA — must be set up and a specification file created that looks like this:

```
.pl 6                    (page length 6 lines)
.mt 0                    (turn off top margin)
.mb 0                    (turn off bottom margin)
.df names.dta            (define file to get names from)
.rv fname,lname,address,city,state,zip
&fname& &lname&          (read variables from data file)
&address&
&city &state& &zip&
.pa
```

* * * * * * *

Saving Your File When the "Disk Full" Message Appears

by Herschel E. Davidson II

How can you avoid losing your file when WordStar comes up with `ERROR #12, DISK FULL`, message when you are in the edit mode?

Prevention is the best cure. When you revise a text, remember that WordStar needs room for its .BAK files. If there is not enough room for your disk for both the revised file and its .BAK file, make room before you edit.

If, however, you get caught in edit with `ERROR #12, DISK FULL` message, all is not necessarily lost.

- Press the **ESCAPE** key, as WordStar directs. Unless you get another `ERROR #12` message, you can possibly save your file.
- Type **^KF** to bring up the disk directory.
- To make additional space on your disk, delete any file you can spare by typing a **^KJ filename.ext**.
- If you still need more space, use **^KO** to copy files to another drive, then delete them from the full disk.
- If you have a full WordStar disk to one drive and a full disk of text files in the other, note that you can make some space on the WordStar disk by deleting WINSTALL.COM, WS.INS, WSMSGS, assuming of course, that you have backup copies (of these programs).
- Since **^KF** is a toggle, you can remove the disk directory from screen by typing it once again when you have cleared enough space on your disk.

*[Article from the **Alamo KUG Journal.**]*

[You can sometimes also mark your text file as a block using **^KB** *at the beginning and* **^KK** *at the end.* **^KW** *will ask you for the name of the file you want to write on. You can then put a blank, formatted disk into your Drive A and write the block to that disk. Be sure to replace your WS disk in Drive A after you save your text. Jack]*

* * * * * * *

ASM, WordStar, SuperCalc, and More

by Phillip P. Pflager

The letter in the December ***FOGHORN*** asking for a column to explain odd ball facts and "what the instruction books don't tell the beginner" really hit home. I have spent more time tearing my hair out over some simple problem that should have been explained or was incorrectly explained in the documentation.

Even worse is finding out that the correct explanation is there, not only in black and white but also in boldface print! I am going to start writing these things down as they occur because I can only remember the major problems. There have been so many minor problems that are long since forgotten. I would like to pass along the solutions and tips that I remember.

ASM

When using ASM remember that you use a file name but not an extension. The positions of the extension are used as option specifiers. I spent a whole evening trying to figure out why I couldn't ASM **B:FILENAME.ASM**.

Correct command: **ASM FILENAME.BBZ** (This is in the manual. The extension refers — in order — to .ASM file location on Drive B; .HEX file location on Dive B; and .PRN file location — none produced.

Use the **N** option of WordStar when creating ASM type files! I invoked WS with the command line:

```
WS FILENAME.ASM
```

That caused WS to come up in the **D** mode. When I edited the file, unwanted WordStar control characters were added that stopped the assembly process. I figured out what happened the next day but by that time I had erased the file and started over.

DDT

The **M** instruction will not correctly move a block of memory into itself. If the blocks of memory that you are trying to modify overlap, first move the block to a temporary storage area. Then zero all the bytes in the location where it will be moved. Finally move the block from temporary storage to the final location. If you have never had this happen try the following command to see the result:

```
M100,200,103
```

The **H** instruction will return the hex sum and difference of the following two hex numbers:

```
H0600,0200
```

returns:

```
0800 0400
```

When logged on Drive A it is not possible to automatically use the **R** instruction to read a file from Drive B. In the past, I have exited DDT and started over. Now when I need to read a file from Drive B I use the following sequence:

```
IFILENAME.EXT↵
S5C↵
02↵
R↵
```

(where ↵ means carriage return).

MOVCPM

The largest system I can create with my Osborne double density system is 59K, not the 60K as stated in the manual for single density.

STAT

Commands to change a diskette in Drive X:

Make diskette/read only: **STAT X:\*.* $R/O**
Make diskette/read write: **STAT X:\*.* $R/W**

SUBMIT

When you create your SUBMIT file be sure to hit ↵ (carriage return) after your last line. This leaves one blank line after the last command. Leave one and only one blank line or the SUBMIT file will not work.

Example of a SUBMIT (FILENAME.SUB) type file:

```
DIR *.COM
XDIR *.COM
STAT *.COM↵
(Leave this line blank)
(No more blank lines!)
```

SuperCalc

Trig functions are calculated in radians!

(PI/180) * degrees = radians
(180/PI) * radians = degrees

Page 10 of the December 1985 ***FOGHORN*** contains an example of this problem. To make the equation on page 10 work correctly convert F6, C12 and F8 to radians and SuperCalc will return the correct answer.

While testing the trig functions I decided to produce a simple example. Finding the sine of 30 degrees and then finding the arc sine of the sine of 30 degrees sounded simple. The sine of 30 degrees is 0.5 and the arc sine of 30 degrees is 30. Compare the formulas to the results in the following example.

Formulas

	A	
1.)	PI/180	use to convert degrees to radians
2.)	180/PI	use to convert radians to degrees
3.)		
4.)		
5.)	30*A1	convert 30 deg to radians
6.)	SIN(A5)	find sine of A5
7.)	ASIN(A6)	find arc sine of A6
8.)		
9.)		
10.)	SIN(A6)	find sine of A6
11.)	ASIN(A10)	find arc sine of A10
12.)	ASIN(A11)	find arc sine of A11
13.)	A12*A2	convert radians to degrees

Result

	A	
1.)	.017433	
2.)	57.29578	
3.)		
4.)		
5.)	.5235988	
6.)	.500000	sine of 30 degrees
7.)	ERROR	?????
8.)		
9.)		
10.)	.4794255	
11.)	.5	why is A11 different from A6?
12.)	.5235988	
13.)	30.00000	

As you can see I was able to get the correct answer by a roundabout way. Does anybody know a better way?

When using **/x** (execute) command in SC, you must enter the filename and extension of the execute file, i.e., FILENAME.EXC. If you just enter FILENAME, SC is not able to locate the file unless its extension is **.XQT**.

WordStar

Remember to hit at least one ↵ after the last line of the text files you create with WordStar or any text editor. This will leave at least one blank line at the end and is important to other programs that manipulate the text file.

I hope that these tips will save someone some grief. I plan to stick to my pocket calculator for the trig functions.

• • • • • • •

A Fast, Easy Way to "Read In" Text Files with WordStar

by Steve Lawrenz

If you ever work on, let's say, a sermon, and you want to bring into the sermon something that's in another file, it's no problem. Just use **^KR** (control KR).

But what if the file you want is on another disk?

Some people **PIP** the file onto the disk they're using, and then use **^KR**. That's a lot of work.

There is an easier way that is very much faster. Let's assume that:

a) You have WordStar in Drive A.
b) In Drive B you are working in a file named SERMON, and;
c) You want to copy into SERMON a file named INFO, and INFO is on another disk.

Then follow these directions:

1) Type **^KR**.
2) At ^KR's prompt, type **A:INFO**.
3) Take the WordStar disk out of Drive A, and put into the drive the disk that has INFO.
4) Hit the ↵ (carriage return), and INFO will copy into your SERMON file.
5) Immediately after the ^KR process is completed, take out of Drive A the disk containing INFO, and put your WordStar disk back into the drive. (If you don't do this, and start working in WordStar, you will have problems!)
6) Now proceed with your sermon work. There will be no error readings if you followed the instructions.

• • • • • • •

Clamp Those Surges

by Jim Lewis

Does your cursor skip a line every time your refrigerator comes on? Did you smell smoke the last time lightning struck near by?

If you answered yes to any of the above, you need to know about surge protectors. Guest speaker, Philip A. de Langis, Ph.D., of Verite Power Protection Equipment, shared his expert knowledge of the subject with the Pasadena OKOK club.

A power surge is any sudden increase in the voltage on your house wiring or other distribution lines. Those that concern computer owners are generally very brief, lasting a period measured in milli- even nanoseconds.

They can be of very high voltage, high enough to destroy your power supply in just those nanoseconds. And if it gets through the power supply — well next in line are all those beneficial electronic demons on whom so much of our emotional life depends.

To bring this home in another way, Dr. de Langis was inspired to his research in surge protection after witnessing a tragedy in a hospital operating room caused by an unprotected electrical device. (That was a number of years ago. Medical devices are protected today — many of them by devices Dr. de Langis developed just for that purpose.)

The preventive for surge damage is, logically enough, a "surge protector". These are devices that are placed in the electrical circuit between the distribution line and the equipment to be protected. As applied to micros, they plug into the house wiring outlet and the computer plugs into the surge protector.

They react instantly to "clamp" the surge, i.e., to shut off the excess power of a surge before it can get to your computer. How they do this is still beyond me, but I gather from Dr. Ghensis that they use esoteric electronic devices related in some way to those that make our Ozzies, Kaypros, etc., compute.

Surge protectors come in many sizes and prices, from a little one-outlet device from Radio Shack for $10 through six outlet devices for $40 and up to large devices for large equipment costing many hundreds of dollars. The effectiveness, reliability, and the size of surge they protect from also varies. Like anything else you get what you pay for.

Some also filter out electromagnetic interference. This is not necessarily so damaging but at the least is annoying.

What causes surges? The most common surge is relatively small and results when a heavy load is suddenly put on the house wiring. These seldom cause a great deal of damage but can cause strange malfunctions (the jumping cursor is a mild example) and loss of data. Weak circuits or circuits that are approaching maximum allowable load are particularly susceptible.

The cause can usually be traced to devices like a refrigerator, air conditioner, or portable heater that switch off or on periodically. But even turning a printer on can have a noticeable effect. (Turning on the most critical device, usually the computer itself, last, is a good rule to follow.)

The heavier surges typically have a cause external to the house wiring. Lightning, a short or arc in a substation or transformer are good examples. None of the causes can be predicted.

Although Verite apparently specializes in protective devices for medical equipment, it makes and sells all types. All are based on Dr. de Langis' patents and work slightly differently than others.

While most of the less expensive protectors clamp surges between the two active lines of a 110 volt circuit, the Verite clamps between each active line and the ground line (that large, half round pin that goes in the wall socket first).

All this is not meant to scare you. Some computer users have gone for years without a problem. On the other hand some have fried more than one computer before getting a surge protector. You just never know.

[OKOK stands for Osborne Komputers Owners' Club.]

• • • • • • •

ARTICLES

Taking Full Advantage of the User Areas

by Jerry Boyce
LOGIC Librarian

One of the very great features that CP/M provides is the ability to assign USER areas to a disk. Each user area is then an entity unto itself and is used as if it were another disk. This is great for keeping a series of programs separate and the first time that I really put this to use was to keep two checkbook programs for two separate checking accounts on the same disk.

CP/M will permit you to have up to 16 (0 thru 15) user areas on any disk. This goody is built into the CP/M system but for this feature there is one "gotcha". You are not permitted to work across user areas, i.e., you may not access WordStar in USER 0 from USER 1.

This is true not only on an individual disk but from a different user area on the other drive, e.g., if you have booted WS from A USER 0 you may call and edit a file on B USER 0 but not B USER 1. This means that if you plan to use WS in more than one user area, you must have WS in each user area and this uses 70K of the disk space for each area that you have placed WS. This is not good even if you have upgraded to the 360K or the 780K disks.

But help is now here.

While roaming around the RCP/M's last week, I downloaded two programs that solve the problem in different ways.

One allows the placement of a file in another user area without using any disk space but does use directory space. In the case of WS, it would use three of your directory spaces for each additional user area that it is placed. This is not too bad, since the files are large, as you are permitted to have 32 files on a single density disk, 64 files on double density and 256 files on quad density.

The second program requires only that a slightly modified .COM file be placed in the additional USER areas with the overlays only in one area. The modification is done by the program after you enter the info requested at the program prompts. You do not have to use DDT or any of the other hackers' tools. The modification adds 2K to the .COM file and in the case of WS ver. 2.26, the .COM file now requires 22K and must be placed in each user area and even may be run from user areas in the second drive with the overlays only in one user area (preferably USER 0 on Drive A).

The first program mentioned above is CERTIFY written and placed in public domain by Mr. Carl Beck, and the second is SETDRU written and placed in public domain by Mr. Michael M. Rubenstein.

I prefer to use the CERTIFY program, although it requires more work to use, as it does not use any disk space regardless of the number of user areas on the disk. If the disk in Drive A is set up for, say, three user areas, then it is possible to use the same three user areas on Drive B normally by calling WS from an area on Drive B. An example: if your text file on Drive B is in USER 1, you log onto "B" and call USER 1 then at the prompt B1› type **A:WS**↵.

You cannot be in A0 and call B1: in fact WS will not permit you to log across user areas even on the second disk. Without this modification, you would have to have the complete WS programs in USER 1 on Drive A in order to edit a file on "B1".

The use of user areas on a disk does not categorize file location on the disk as might be expected. If you view the directory tracks of a multiple user area disk using DDT, SUPERZAP, or the CERTIFY programs, you will find that there is a complete random distribution of the files with no regard to the user area. The files will be in order only if placed on a clean disk in user area order.

CP/M places files on a disk starting with the first available block as it hunts through the directory area for space. The directory area allocates a minimum of 32 bytes for each file on the disk with some large files occupying two or more 32 byte areas. This you will see later when a file is reassigned. The first byte of the 32 byte area specifies the drive user code of 0 to 15 that you are allowed; the next 11 are for the filename and the extent; byte number 12 gives the block number for this 32 byte block used by the file; byte number 16 states the total number of blocks used for the file; and the balance is used to state the locations on the disk for each block occupied by this file.

From the above information it was concluded that copying the file block info used for USER 0 and changing only the number in the first byte to a different user area, the file could be called from any user area without entering the file in that area. This is what we will do for using WS in two user areas but have only one complete copy of WS on the disk.

* D.COM (SD91.COM) and DISKC.COM (DISK7 ver. 7.6C) were placed on a formatted and SYSGENed disk in USER 0;

* CERTIFY and the three WS files were transferred to USER 0;

* Using DISKC.COM, both D.COM and DISKC.COM were copied to USER 1;

* CERTIFY was then used to bring up the directory area pertaining to the three WS files and a printout was made for reference.

Using CERTIFY and placing the files on the disk in the order that I did, you see Figure 1 when you type **D:B**↵ at the prompt. (modified to fit the ***FOGHORN*** column requirements.)

⇨

Figure 1

```
TRACK    2  -  SECTOR   0  -  PHYSICAL SECTOR   0  -  BLOCK    0

addr 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

00   00 44 20 20 20 20 20 20 20 43 4F 4D 00 00 00 1F .D       COM
10   04 00 05 00 00 00 00 00 00 00 00 00 00 00 00 00 ............
20   00 44 49 53 4B 43 20 20 20 43 4F 4D 00 00 00 1F .DISKC   COM
30   06 00 07 00 00 00 00 00 00 00 00 00 00 00 00 00 ............
40   00 43 45 52 54 49 46 59 20 43 4F 4D 00 00 00 79 .CERTIFY COM
50   08 00 09 00 0A 00 0B 00 0C 00 0D 00 0E 00 0F 00 ............
60   00 57 53 20 20 20 20 20 20 43 4F 4D 00 00 00 7E .WS      COM
70   10 00 11 00 12 00 13 00 14 00 15 00 16 00 17 00 ............

User  Filename    Ext  Records  Assigned Blocks

00   D       .COM  0   031      4   5
00   DISKC   .COM  0   031      6   7
00   CERTIFY .COM  0   121      8   9   10  11  12  13  14  15
00   WS      .COM  0   126      16  17  18  19  20  21  22  23

         (N)ext sector      (P)revious sector     (S)top
         (E)dit             (F)ill with Data
```

We are only interested in the WS.COM block on the first screen, a printout or copy is made of the info, then "N" is hit to bring up the next screen which is Figure 2.

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John Gaudio is an electrical engineer holding two U.S. Patents on computer systems. He's been a consultant to Osborne Computer Corporation and continues to write for their magazine, the Portable Companion, Foghorn, Dog Bytes, and his own newsletter, the Survivor's Guide. Since 1981 he's been helping people get more from their Osborne Computers.

J. Gaudio Company, Box 27626, Denver, CO 80227

Figure 2

```
TRACK    2  -  SECTOR   1  -  PHYSICAL SECTOR   1  -  BLOCK    0

addr 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

00   00 57 53 4D 53 47 53 20 20 4F 56 52 00 00 00 80 .WSMSGS  OVR
10   18 00 19 00 1A 00 1B 00 1C 00 1D 00 1E 00 1F 00 ............
20   00 57 53 4D 53 47 53 20 20 4F 56 52 01 00 00 50 .WSMSGS  OVR
30   20 00 21 00 22 00 23 00 24 00 00 00 00 00 00 00 .!.''.#.$...
40   00 57 53 4F 56 4C 59 31 20 4F 56 52 00 00 00 80 .WSOVLY1 OVR
50   25 00 26 00 27 00 28 00 29 00 2A 00 2B 00 2C 00 %.&.'.(.).*.
60   00 57 53 4F 56 4C 59 31 20 4F 56 52 01 00 00 56 .WSOVLY1 OVR
70   2D 00 2E 00 2F 00 30 00 31 00 32 00 00 00 00 00 -.../.0.1.2.

User  Filename    Ext  Records  Assigned Blocks

00   WSMSGS  .OVR  0   128      24  25  26  27  28  29  30  31
00   WSMSGS  .OVR  1   080      32  33  34  35  36
00   WSOVLY1 .OVR  0   128      37  38  39  40  41  42  43  44
00   WSOVLY1 .OVR  1   086      45  46  47  48  49  50

         (N)ext sector      (P)revious sector     (S)top
         (E)dit             (F)ill with Data
```

A printout or copy is made and a check of the next block shows that WSOVLY1.OVR does not extend to a third block. We now know that WS.COM uses only one file control block while the two overlay files each need two file control blocks. The third screen is called and shown in Figure 3. This is the screen that was checked previously to make sure that WSOVLY1.OVR did not extend into the third block.

Figure 3

```
TRACK    2  -  SECTOR   2  -  PHYSICAL SECTOR   2  -  BLOCK    0

addr 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

00   01 44 20 20 20 20 20 20 20 43 4F 4D 00 00 00 1F .D       COM
10   33 00 34 00 00 00 00 00 00 00 00 00 00 00 00 00 3.4.........
20   01 44 49 53 4B 43 20 20 20 43 4F 4D 00 00 00 1F .DISKC   COM
30   35 00 36 00 00 00 00 00 00 00 00 00 00 00 00 00 5.6.........
40   E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 eeeeeeeeeeee
50   E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 eeeeeeeeeeee
60   E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 eeeeeeeeeeee
70   E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 eeeeeeeeeeee

User  Filename    Ext  Records  Assigned Blocks

01   D       .COM  0   031      51  52
01   DISKC   .COM  0   031      53  54

         (N)ext sector      (P)revious sector     (S)top
         (E)dit             (F)ill with Data
```

This shows that entries may start with the third block or on line 40 and that the block for WS.COM and one block for WSMSGS.OVR may be entered with this screen. Hit **E** for edit and you will be prompted for the position to start. Type in 40 and 40 E5 will show. We will make all entries in HEX as they are listed in HEX on the printouts or copies that were made. Each entry is immediately followed by the letter **I** for insert without hitting a ↵ (carriage return) as the **I** also acts as the ↵.

If a ↵ is hit you will skip the next position as the message "Data Left Unchanged" will appear. If you should not get the data entered by hitting the ↩ or not entering the **I** for insert, continue with your entries. You will be given a chance to make any corrections needed after you have completed all entries for that screen by reentering the edit mode.

At the 40 E5 type **01I** to show that this file is to be in USER 1 and the line will be completed with "01H HEX number inserted", then 41 E5 will appear on the next line. Then following your printout for WS.COM, you type **57I** and continue to follow the printout for the two rows or 32 bytes. All of the E5's must be replaced with the proper HEX number.

You complete the two rows for WS.COM and continue on with the "01" at location 60 for the first byte for WSMSGS.OVR. After you enter the last 00 for position 7F, type a period to save that screen and check for errors before proceeding to the next screen. The screen should appear as in Figure 4.

Figure 4

```
TRACK    2  -  SECTOR   2  -  PHYSICAL SECTOR   2  -  BLOCK    0

addr 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

00   01 44 20 20 20 20 20 20 20 43 4F 4D 00 00 00 1F .D          COM
10   33 00 34 00 00 00 00 00 00 00 00 00 00 00 00 00 3.4.........
20   01 44 49 53 4B 43 20 20 20 43 4F 4D 00 00 00 1F .DISKC    COM
30   35 00 36 00 00 00 00 00 00 00 00 00 00 00 00 00 5.6.........
40   01 57 53 20 20 20 20 20 20 43 4F 4D 00 00 00 7E .WS        COM
50   10 00 11 00 12 00 13 00 14 00 15 00 16 00 17 00 ............
60   01 57 53 4D 53 47 53 20 20 4F 56 52 00 00 00 80 .WSMSGS   OVR
70   18 00 19 00 1A 00 1B 00 1C 00 1D 00 1E 00 1F 00 ............

User  Filename    Ext  Records  Assigned Blocks

01    D       .COM  0   031      51  52
01    DISKC   .COM  0   031      53  54
01    WS      .COM  0   126      16  17  18  19  20  21  22  23
01    WSMSGS  .OVR  0   128      24  25  26  27  28  29  30  31

        (N)ext sector     (P)revious sector     (S)top
        (E)dit            (F)ill with Data
```

When you have completed any corrections that are necessary and satisfied everything is correct, hit "N" for next screen. All locations will be filled with "E5's" and on the ASCII side it will be all "@'s". When completely filled out, using the info from your printout it should appear as in Figure 5.

Figure 5

```
TRACK    2  -  SECTOR   3  -  PHYSICAL SECTOR   3  -  BLOCK    0

addr 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

00   01 57 53 4D 53 47 53 20 20 4F 56 52 01 00 00 50 .WSMSGS   OVR
10   20 00 21 00 22 00 23 00 24 00 00 00 00 00 00 00 .!.''.#.$...
20   01 57 53 4F 56 4C 59 31 20 4F 56 52 00 00 00 80 .WSOVLY1 OVR
30   25 00 26 00 27 00 28 00 29 00 2A 00 2B 00 2C 00 %.&.'.(.).*.
40   01 57 53 4F 56 4C 59 31 20 4F 56 52 01 00 00 56 .WSOVLY1 OVR
50   2D 00 2E 00 2F 00 30 00 31 00 32 00 00 00 00 00 -.../.0.1.2.
60   E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 eeeeeeeeeeee
70   E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 eeeeeeeeeeee

User  Filename    Ext  Records  Assigned Blocks

01    WSMSGS  .OVR  1   080      32  33  34  35  36
01    WSOVLY1 .OVR  0   128      37  38  39  40  41  42  43  44
01    WSOVLY1 .OVR  1   086      45  46  47  48  49  50

        (N)ext sector     (P)revious sector     (S)top
        (E)dit            (F)ill with Data
```

Hit **S** for stop then at the next prompt type **CPM** to return to the system and go to USER 1 to call up WS which should appear. Exit WS to do a disk directory and you should find that you have entered WS into a second area with no additional disk space consumed.

These changes could also be made using SUPERZAP but not with EDFILE since EDFILE does not access the directory area. The use of CERTIFY is better because you have the disk location sectors to help check the changes that you are making.

[CERTIFY is on FOG/CPM.020 and SETDRU is on FOG/CPM.033]

* * * * * * *

Sweet Victory

by Mark Sevi

The room is quiet and dimly lit
once more I brave the Beast,
I risk my mortal mind and soul — but,
this date with fate I'll keep.
Amusement once, a game no more
this fight is for my soul,
Computer, I'll know your secrets tonight,
or you'll call the closet home.
An angry whisper, a flash of light
the nightmare starts again.
I wipe the sweat from clammy hands
and pray for this to end.
So far — so good it's going well
much better than I dreamed,
but then, with no warning an ERROR appears!
and I begin to SCREAM !!
I feel the tug of madness near
my mouth begins to foam,
the will to live now slowly drains,
a death wind starts to blow.
But as my doom now pushes near
and blackness fills my sight
a whisper of new hope is seen
a slender ray of light.
YES! Oh yes, I remember now
how could I've been so blind?
Today I finally opened and read—
The Operator's Guide !

Tonight, you beast, you're mine . . .

* * * * * * *

Hex, CP/M Isn't Hard to Understand Byte by Byte

by Bill Powell

[The author is using a Kaypro and some comments are Kaypro-specific but the information is generally relevant to all CP/M computers.]

CP/M is the operating system of your computer. It lets you read and write from disk to various external devices (one of which is your keyboard and CRT). The CP/M operating system is made up of several components, each to be discussed separately. These components are: BIOS (Basic Input-Output System), BDOS (Basic Disk Operating System), CCP (Console Command Processor), TPA (Transient Program Area), and Page Zero (or System Buffer Area).

The Page Zero area begins at the bottom of the lowest memory area in your computer (0000H) and extends to just below the TPA (0100H). This area is used for many different things, as we will see.

The first entry in Page Zero is called the Warm Boot Vector, and is an Assembler JMP instruction to the code in CP/M that causes your system to Warm Boot. We will talk more about that later. If you were to invoke DDT and type in **L0** you might see:

```
0000 JMP E2A2
```

Don't worry if the JMP address is different in your system. This number will vary between versions of CP/M.

Location 0003H is used to store a value called the I/O Byte. This Byte (8 bits) is used to store the cross reference of CP/M devices and your system's actual devices. The I/O byte is mapped as follows:

Bits	7 6	5 4	3 2	1 0
CP/M : Device:	LIST	PUNCH	READER	CONSOLE
Value				
00 (0):	Serial Port	Serial Port	Serial Port	Serial Port
01 (1):	CRT & Keyboard	Serial Port *	Not Used	CRT & Keyboard
10 (2):	Parallel Port	Not Used	Not Used	See Note
11 (3):	Serial Port*	Not Used	Not Used	Not Used

NOTE: CP/M documentation states that when the bits for the Console = 10, then the Console function is split so that input is accepted from the Reader assignment, and output is directed to the List assignment. I haven't tried this out yet.

NOTE *: On Kaypros that have a serial Printer port, this is a special type of port that uses hardware to signal printer ready.

This mapping of logical (CP/M) and physical devices was implemented to allow easy switching between devices way back when the console was a Teletype machine that also had a paper tape reader and punch. Today, the I/O byte isn't frequently used except as a way to direct printer output between a serial and parallel printer. The I/O Byte for most Kaypro's is 81H, which makes:

```
LST: = Parallel Port
PUN: = Serial Port
RDR: = Serial Port
CON: = Keyboard and CRT
```

You can check this out for yourself for your system by typing:

STAT DEV:

The STAT program will then give you a list of current device assignments for your system.

Location 0004H is the place where CP/M stores values representing the current user and the logged disk. The upper 4 bits represents user 0000 (0H) through 1111 (FH). This corresponds to user 0 through User 15.

The lower Nyble represents drives 0 — FH, or Drive A — P. That's right, CP/M supports 16 disk drives. Unfortunately, not many systems have the hardware required to run that many disks.

Location 0005-0007H is the place that programs call to make use of CP/M. This location is called the BDOS vector, and GOOD programs use ONLY supported CP/M calls through BDOS. I say good programs, because some of the "Bigger-Better-Faster" programs go directly at the guts of the machine, and create a situation where the program will only run on that specific type of system.

Locations 0008H through 0027H are reserved for "Software Interrupts" by the Z80 processor. An Interrupt is a way in which the system can run an external device at the same time as another program. When the external device needs the Z80 to pay "Attention" to it (like to send more data), the device sets an address of the interrupt on the Z80 data buss and "Interrupts" the current program.

The Interrupt address may be one of 8 values (0-7) which represent one of 8 addresses. Each interrupt location is 8 bytes long, and will contain (at least) a JMP to the location of the program that will serve the external device, and then return control to the program that was originally executing. However, CP/M does not directly support Interrupt processing, and therefore nobody uses it much.

The 8 interrupt locations are:

RST 0 = 0000H
RST 1 = 0008H
RST 2 = 0010H
RST 3 = 0018H
RST 4 = 0020H
RST 5 = 0028H
RST 6 = 0030H
RST 7 = 0038H

The CP/M system can't support RST 0 as it would cause a warm boot. RST 1 through RST 5 aren't supported, and are not used. RST 6 is reserved for use by the SID debugging program, and RST 7 is reserved for use with DDT.

This brings us up to location 0038H. From here through to location 003FH aren't used by CP/M, but are reserved anyhow.

Let's take a moment to review. Graphically, this is what we have looked at so far:

```
ADDRESS         Contents
===========================================
0000  JMP FA03  Jump to Warm Boot routine
0003  81        I/O Byte
0004  ud        User/Drive indicator
0005  JMP FB00  Jump to BDOS functions
0008  RST 1     Interrupt location (RESERVED)
0010  RST 2     Interrupt location (RESERVED)
0018  RST 3     Interrupt location (RESERVED)
0020  RST 4     Interrupt location (RESERVED)
0028  RST 5     Interrupt location (RESERVED)
0030  RST 6     Interrupt location (RESERVED)
0038  RST 7     Interrupt for DDT
003B            Reserved
thru            by
003F            CP/M
```

The next 16 bytes (0040H — 004FH) are reserved as a "Scratch" area for use by the BIOS. This area isn't necessarily used, but is reserved as "extra" space that may be used to hold data temporarily.

Locations 0050H through 005BH are not assigned, but are reserved, like the other reserved spaces, for future CP/M enhancements.

The area beginning at 005CH and extending through 007CH is called the "Default FCB" (or File Control Block). The FCB is used by a program running in the TPA to access Disk files. It is the default, because it is provided by CP/M. The programmer may elect to provide his own FCB (or FCBs if the program is accessing more than one disk file) and need not use the one at 005CH. In either case the FCB is organized as follows:

* Byte 0 (005C) is the Drive code as follows: 0 = Default. The user didn't specify a drive, so the system gets the current drive from the lower Nyble of 0004H. 1 = Drive A, 2 = Drive B, and so-on.

* Bytes 1 (005DH) through 8 (0064H) contain the filename, in upper case.

* Bytes 9 (0065H) through 11 (0067H) contain the file type (or extension) in upper case. The high-order bit of the file type is used to hold the attributed of the file. If the high bit of byte 9 is set (1) it indicates that the file is Read/Only, and can't be erased or updated. The high bit of byte 10 indicates that the file is a "SYS" file, and doesn't show up on a DIR command. The high bit of byte 11 is supposed to show if the file has been updated, but this function isn't always implemented properly.

* Byte 12 (0068H) indicates the "extent" number (or system record) of the file that is currently being accessed. This Byte is maintained by CP/M, and is usually set to 0 by the programmer.

* Bytes 13 (0069H) and 14 (006AH) are reserved for use by CP/M, and are set to 0 by the programmer.

* Byte 15 (006BH) is used to keep track of the number of records within the current extent. (An extent might not be full, if it is the last or only extent.)

* Bytes 16 (006CH) through 31 (007BH) are reserved by CP/M for it's internal use.

* Byte 32 (007CH) indicates which record, in the current extent, is active (will be the next to be read or written). This byte is set to zero, so the program starts at the beginning of the file.

* Bytes 33 (007DH) through 35 (007FH) are used to directly access a particular record without reading through the whole file. This technique is called "Random Access", and assumes that the program has the smarts to calculate the record number and place it here.

To see an FCB in action, type:

DDT B:NOFILE.TST

Then tell DDT to:

D5C

and look at 005CH through 007FH.

Now, lets look at the 0080H through 00FFH area. According to the CP/M documentation, this area has two uses. The first is to act as the default 128 byte disk buffer. This would be the place that each 128 byte block of disk data would be stored before and after disk access. But the CP/M documentation says that this area is also the location of the command line data that is entered by the user when he calls up a program. Like in:

PIP A:FOOBAR.DOC = B:NOTHERE.TXT

Everything after PIP is placed in the command tail at 0080H, and is read by PIP. (That is how programs accept data entered on the command line.)

The question is: How can the same area be used for two different things? The first disk access is going to clobber the command tail.

The answer is relatively simple, They can't. It is the responsibility of the programmer to either:

1. Completely process the command tail prior to ANY type of disk access.
2. Move the command tail to a "safe" area prior to performing disk accesses.
3. Designate an alternate area to be used for disk buffering.

Speaking of programs, that is what resides in the area beginning at 0100H and extending up to the bottom of the CCP. This area is called the TPA (Transient Program Area) and is where most user programs are loaded and run.

The user program may use all of the TPA (up to E400H in a 64K system) and may use any CP/M function, and, in fact, should use ONLY supported CP/M functions in order to be able to run in any generic CP/M system. Research Inc. sup-

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plied a program (part of CP/M) that interacts with the user when there is no other program running. CCP is responsible for the A> prompt that greets you during intermissions.

The CCP is loaded into memory at cold and warm boot, and provides the "built-in" DIR, ERA, REN, SAVE, TYPE and USER functions. It also processes .SUB files, logs in disk drives, and loads and executes other programs.

The CCP also supports a rudimentary line editor, which will allow editing of the command line. It is the CCP that formats the command tail that shares 0080H with the default disk buffer.

Now we all know that no program is perfect, but the CCP seems to have taken it's share of lumps. It is the guy that gets replaced by the ZCP in ZCPR1 and ZCPR2. The point here is, although the CCP is provided by DRI as part of CP/M, there is no reason to be afraid to enhance your system in any way that doesn't discard CP/M compatibility.

Once the CCP has loaded a program, its space in memory may be safely used by the transient program, IF it causes the system to warm boot (and reload the CCP) when it terminates.

Next, at EC06H, is the BDOS or Basic Disk Operating System. This is the "heart" of CP/M as supplied by DRI and allows the programmer to call upon 37 different, hardware independent functions. This allows a properly written program to run on almost any CP/M machine without change.

Nine of the BDOS functions deal with the "Man-Machine" interface (CRT, keyboard, printer, etc.), five functions allow interface with the system, and the rest relate to the creation, reading and alteration of disk files.

The BDOS functions are translated into other functions that are extremely machine (hardware) specific. These hardware specific functions are coded by the designer of the system and are part of a module called the BIOS (Basic I/O System).

The BIOS (Basic I/O System) begins at FA00H and extends to the top of memory. The code in the BIOS maps 17 required functions into action on the part of system hardware.

On many computers, most of the "meat" of the BIOS is part of the System ROM. In fact, part of the memory image of the BIOS can come, not from disk, but from ROM. This can make life for those who choose to ""enhance"" the operation a tad more interesting, as you can't alter ROM storage without access to some fancy equipment.

[Taken from an article for the KUGNJ CP/M Special Interest Group; Kaypro Users Group of New Jersey, Roosevelt, NJ 08555-0364.]

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Want Back Issues?

Please refer to **FOG MEMBER MERCHANDISE** in this issue for information on obtaining back issue copies of ***FOGHORN***. We maintain an inventory of back issues because the information contained in them can save you hours of aggravation!

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Imprinting

by Bob Thomson

I'm not sure anybody really understands it (I don't, anyway) — but it seems to happen to all living things. It is not instinctive and appears to have more to do with memory. It is the mechanism by which aborigines can find their way back to places they haven't been for decades, and birds can find old nesting places. You have heard of it. It's called imprinting.

But what does it have to do with you and your computer? I have observed many times that I can tell someone how to do something over and over, in several different ways and they still don't understand what I mean. But I have only to show them once or twice and they never forget it.

That is the main reason you see the urging in these articles to try things out for yourself, or ask someone to show you. In nearly every case you will learn something useful to you — and often you will have enlarged your sphere of knowledge about your computer and about the usefulness of the programs you use.

Doing something is a much better way to learn about it than having someone else describe how to do it. Our command of our own language is sometimes just not good enough to say what we mean. A picture may be "worth a thousand words" but a demo is even better. Maybe a demonstration includes just the right body language, I don't know. But somehow it seems to work better than just telling someone, or even drawing a picture.

But don't always depend on someone else who you perceive to be "smarter" than you to show you how. The best way to learn and retain something is to discover it for yourself.

Sometimes we have no choice but to read about something and then try to do what the author was trying to tell us. Just the act of trying can teach us something and often, by trying, what (s)he was describing suddenly becomes clear.

Many computer owners limit themselves to just one or two applications. Most of you received a word processor, a spreadsheet and a version of BASIC with your computer. Some of you also received a data base or file manager program. And there are literally hundreds of public domain programs in the disk library.

If you have not tried your hand at all of the software provided with your computer then I urge you to do so. You are missing something. I don't mean that every program will be useful to you all the time, but learn how to use them. Who knows when you will want to run an amortization schedule using BASIC or calculate your Net Worth in SuperCalc. If you don't know how to run them, the time when you have an urgent need is not the best time to learn them.

Try them. Learn by doing. If you can't fathom them, ask someone for help. Try to find others in the group with the same interests. Form a Special Interest Group (SIG).

Imprint that knowledge, technique or program step and you'll never forget it!

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Using NEWFACE to Modify Printer Features

by Stan Symons

This article describes how to use MBASIC's NEWFACE to modify printer features. In my case, the program is for the Osborne Executive and the Epson FX-80 printer. Thanks go to Fred Harris and to EPSON AMERICA for the program and permission to reprint.

When a disk (created below) is booted up you get a menu, from which you can select the features which you want from your Epson printer and then WordStar is brought up. NEWFACE.BAS can be modified to give you the features you want.

Should you want to change the selected features before printing, then eXit WordStar, and type:

```
MBASIC NEWFACE↩
```

The menu will reappear.

To prepare the disk, place the CP/M+ System disk (1 of 3) in Drive A and place a blank disk in Drive B. Call up COPY and format the new disk in B. Then call up COPSYS from Drive A and SAVE it on B.

Place a WordStar disk in Drive A and boot that up. Log on to Drive B and create a file in the Non-document mode entitled PROFILE.SUB. In this file you will put:

```
MBASIC NEWFACE
WS
```

Save this on Drive B with ^KX (control KX).

Remove the WordStar disk and put the CP/M+ General disk (2 of 3) in Drive A and call up PIP. With the * on the screen enter:

```
B:=A:SUBMIT.COM↩
```

Replace the disk in A with your WordStar disk and enter the following:

```
B:=A:WS.COM↩
B:=A:WSOVLY1.OVR↩
B:=A:WSMSGS.OVR↩
```

Now replace the disk in A with the MBASIC disk and enter the following:

```
B:=A:MBASIC.COM↩
```

Now the disk in B is ready for NEWFACE.BAS; a listing of which follows. Enter **^C** and the A> should appear, then enter **MBASIC**, and when that is loaded you can enter NEWFACE from the listing below. When you have entered it and checked it for accuracy you can save it as follows:

```
SAVE"B:NEWFACE.BAS"
```

You have completed this disk. Label it and place it in Drive A and cold boot it. The menu will appear and you can make your selections. As you enter each number you will hear a beep but when you enter "13" there will be no beep but you will see A> and WS. WordStar will then load automatically.

NewFace Program

```
100 REM COMPLIMENTS OF THE PRINTER PRODUCT GROUP
110 REM PERIPHERAL SUPPORT EPSON AMERICA
120 ES$ = CHR$(27) : BEL$ = CHR$(7)
130 LPRINT CHR$(27);''@'';
140 PRINT:PRINT:PRINT:PRINT:PRINT
150 FOR I = 1 TO 13
160 READ MENU$ : PRINT MENU$,''('';I;'')''
170 NEXT I
180 PRINT ''**LETTER QUALITY, LQ-1500 ONLY''
190 PRINT:PRINT:PRINT
200 PRINT ''ENTER NUMBER AND HIT <RETURN>'';
210 INPUT X
220 ON X GOTO 240,250,260,270,280,290,300,310,320,330,340,:
350,370
230 PRINT BEL$;:GOTO 200
240 LPRINT ES$;''P'';BEL$; : GOTO 360 : REM PICA
250 LPRINT ES$;''M'';BEL$; : GOTO 360 : REM ELITE
260 LPRINT CHR$(15);BEL$; : GOTO 360 : REM COMPRESSED
270 LPRINT ES$;''W1'';BEL$; : GOTO 360 : REM DOUBLE WIDTH
280 LPRINT ES$;''G'';BEL$; : GOTO 360 : REM DOUBLE STRIKE
290 LPRINT ES$;''E'';BEL$; : GOTO 360 : REM EMPHASIZED
300 LPRINT ES$;''4'';BEL$; : GOTO 360 : REM ITALIC
310 LPRINT ES$;''S1'';BEL$; : GOTO 360 : REM SUBSCRIPT
320 LPRINT ES$;''S0'';BEL$; : GOTO 360 : REM SUPERSCRIPT
330 LPRINT CHR$(15);ES$;''S1'';BEL$; : GOTO 360 : REM TINY
340 LPRINT ES$;CHR$(120);CHR$(1); : GOTO 360 : REM LETTER;
QUALITY
350 LPRINT ES$;''@'';BEL$; : GOTO 360 : REM RESET
360 GOTO 200
370 SYSTEM : REM ''OR END''
380 DATA ''PICA'',''ELITE'',''COMPRESS'',''DOUBLE WIDTH'',:
        ''DOUBLE STRIKE'',''EMPHASIZED''
390 DATA ''ITALICS'',''SUBSCRIPT'',''SUPERSCRIPT'',''LQ**'',:
''TINY'',''RESET'',''EXIT''
```

To make this easier to enter I suggest you use SETUP on CP/M+ SYSTEM disk (1 of 3) and set up the function keys on your MBASIC disk as follows:

1 = LPRINT
2 = PRINT
3 = ES$;
4 = BEL$; : GOTO 360 : REM
5 = CHR$(

If you need any help I can be reached at (408) 578-0179, but please, not after 9pm PST. Thanks and Good Luck.

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Have a Submission?

Please refer to the ***FOG Membership Information*** brochure (which is sent to each member with the **FOG** membership card) for information about submitting material to ***FOGHORN*** or to the disk library.

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Please see previous FOG issues for complete specifications on the Executive ESU (double-sided drive) Upgrades.

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BOOK REVIEWS

The Other Way to Learn More About Computing: A Review of Helpful Books

by Ron Kenner

Read Any Good Computer Books Lately?

EXPLORING THE WORLD OF THE PERSONAL COMPUTER, by Jack Nilles, published by Prentice-Hall, Inc, 1982, offers a readable overview and refresher course for experienced computerites. It is also a good introduction for us computer neophytes who still associate RAM with Walt Disney's "Bambi" and who still suspect the best reading material on BAUD may be found in the ***Satyricon*** or ***Rabelais***.

This is especially so if, like me, you think hardware comes from a hardware store and "softwear" from a clothing store; if a Mother board sounds like it has to do with ironing; or a computer "virus" or bug or a byte or something electrical that "hertz" sounds like you need a medical doctor, then this may be the book for you.

It's something you might read almost for the fun of it, or simply for a better idea of what's happening in the computer world, and of what's "on the boards" for the future.

Somewhat different among computer books, this one is neither a "how-to", a tutorial, a comprehensive text book, or specialized documentation keyed to any particular equipment or program.

With some 230 pages ($12.95), the book appears both wide ranging in scope yet loaded with particulars. Also different, it is written in easily comprehensible language in a personal and informal tone, as distinct from either hard-to-follow computerese or poorly written manuals prepared by companies rushing to meet competition.

EXPLORING THE WORLD OF THE PERSONAL COMPUTER essentially does what the title says it does. Without presupposing computer background, yet written for the intelligent reader, the author takes us from specific territory, such as a pea-sized microchip, to larger, historical glimpses, to current computer perspectives, and on to reflections about the future role of the computer.

For beginner and pro alike it seems impressive to read about the change in the computer world. The book goes from early transistor — the "cat's whisker" — to the first integrated circuit in 1959, to impressive 15K computers in operation by 1966, to whizbang 106K computers in operation in 1970, to the first personal computer kit in 1974, to 250K personal computers by 1978, and finally on up to personal computers with megabyte capacities. It won't be too many years down the line before we will be wondering how we ever got by with 10 or 20 megabytes.

Such an overview of the personal computer world may offer small help to Osborne or CP/M users working with WordStar, SuperCalc, dBASE II or other programs. The glossary is skimpy at best and although there is a wealth of information, little can be put to use as though it were a tutorial.

Yet somehow a fast read through may help make beginners more comfortable with the personal computer, while also providing general and specific information of interest to more experienced PC users, such as brief information on telecommunications, networking services, and international applications of the personal computer.

Also included is discussion on such topics as a survey of underlying computer technologies, cost trends, problems of compatibility among personal computers, computer needs vs. computer luxuries, computer education, computer crime, the impact of the personal computer on home employment and the traditional office, current and potential personal computer applications, mental health and the computer, and, looming ahead, the problem of computer traffic jams.

dBASE Books

Take a lesson on dBASE literature from OKOK's in-house dBASE expert and instructor John Chafe: "You don't have to scrape the bottom of the barrel to try to find a dBASE book. They're all over the place; and so to maximize your bucks you better find somebody who has read the book before, otherwise you're just going to end up with a lot of flummery."

Following Chafe's sound advice, OKOK sought Chafe's response to the literature based on some dozen dBASE books he reports reading, from his own personal library, and on Chafe's general familiarity with other dBASE books available.

"In dBASE literature the heavyweights are definitely Adam Green, who writes software articles for ***Infoworld***, and Robert Byers, whose books are sold and distributed through Ashton Tate," Chafe said.

Tom Kardos, another OKOK resident expert, opts first for the Byers' book, ***EVERYMAN'S DATABASE PRIMER***, featuring dBASE II.

"This book is probably the finest primer to explain to the novice the entire concept of what a data base is and how it is operated upon in the process of transferring it into a computer model," says Kardos. "Finally it provides a hands-on model as a basic trainer."

Chafe, although sold on Byers enough that he plans to buy his latest book, finds the earlier Byers book wordy and somewhat puffed up without a lot of new material.

He opts first for Green's two books, ***dBASE II USER'S GUIDE***, and ***ADVANCED dBASE II USER'S GUIDE***. These, says Chafe, "are much better books, and have much more code and information per page than do the Byers'".

Chafe acknowledges that Byers offers a good deal of material in his book, but notes: "It takes 75 or 100 pages before he even gets into any code. He's really chintzy with his code".

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Green's books, if taken in order, are palatable, Chafe adds. "If they are not taken in order you'll have a problem, because he has a methodology that he follows religiously. If you don't start with his first book, looking at his second book will be incomprehensible."

But taken together, Green's first two books, the beginning and the advanced, published in a ring binder format, $29 each, "are very good values for the bucks". Check your bookstores for them.

For more advanced dBASE II users, says Chafe, a "must-have" book, "full of useful material," is ***BEGINNING AND ADVANCED dBASE II TECHNIQUES***, by Leslie Shohan and Paul Baril, published by Compudex — their own company — in Nanticoke, Maryland.

"The dBASE books that I got the most out of for the value", Chafe emphasized, were the books by Green, and then another by Alan Simpson, who writes for Cybex, published in San Francisco. "The series of books by Cybex I always found good," Chafe said.

Most of the dBASE books start at "ground zero" and "quickly work their way up", Chafe says, except for those identified as more advanced, or the ***BEGINNING AND ADVANCED dBASE II TECHNIQUES***. "That just contains techniques. It doesn't tell you how to load your disks, what CP/M is, or what MS-DOS is. It just gets right away to the nitty gritty of it."

Chafe highly recommends ***MASTERING dBASE II THE EASY WAY***, by Paul Heiser, (Prentice-Hall, $14.95), as a good first book "for somebody starting at ground zero. Although it doesn't have anything new in it, and it doesn't have any special codes, it has a workable approach . . . somewhat like the approach that dBASE III has in its tutorial offering from Ashton Tate."

"Each chapter gives a short lesson, and it's intended to be a hand's-on lesson. It reads like lightning. Each chapter is so short it rewards you immediately, and it does what lecturers are supposed to do." It does tell you what it says it's going to tell you. A more experienced user, he notes, "can go through that book in a couple of days, because you wouldn't have to do each session".

There are a number of periodicals available that the dBASE user should look into, John adds. "The first one they should look into is ***DATA BASED ADVISER***, a monthly publication for dBASE users, by Data Based Solutions, San Diego." This is available at $35 annually.

"Dinnerstein has a good book out on dBASE. I enjoyed his book," Chafe says, "although it had some errors in it." He adds, however, "I have yet to find a dBASE book without a programming error in it. Every program that I've ever looked at, typed, or tried, had errors in it. And I keep the pages marked in yellow. Publishers can be fooled so easily into thinking that the program works, it is pathetic," he says. "The book by Townsend, ***USING dBASE II***, has mistakes in it. And the Byers book has mistakes in it. The Dinnerstein book has lots of good code, but it also has mistakes in it. There's mistakes in the code, and programs will crash, right word for word from the publication."

Chafe plans to buy the new Byers book and another Ashton Tate work, but Chafe was skeptical about their being much new material. "Definitely," he reminds, "don't throw away the original manual. None of the books you read will ever let you throw away your original manual, because you're going to need to go back to that."

He adds that the original manual "will be more useful to you after you've read supporting material on the outside . . . it will become more valuable because its information is condensed", noting it will take on more meaning "after you have something to fill in all the question marks, questions resolved by the Green, Byers, Simpson or Dinnerstein or other authors that give you the background".

Of some dozen dBASE books in Chafe's library, "I would say at least half of those were wasted", he said. He guessed there might be 20 or 30 good books available, but added "I look at some books nowadays and there's almost nothing new at all. To get the most out of the dBASE literature, you have to start at the beginning", he noted.

"Once you've read one of the beginner's books and you start to understand dBASE II, you can almost digest any of the other books. It's just a matter of pouring through them."

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Books on MBASIC

by Tim Holtwick

This article details a list of MBASIC reference works. I purchased most of the following books for my library although I found a few to borrow from the local public library. Most software stores can obtain them, or you can order from a mail-order house like Spite Software.

Applied BASIC Programming by Roy Ageloff, and Richard Mojena. Belmont, CA: Wadsworth Publishing, 1980. College level textbook approach to teaching "minimal BASIC" as proposed by the American National Standards Institute (ANSI). Broad scope and comprehensive discussion of general BASIC. It is not directed towards MBASIC in particular, although the programs can be adapted easily. For those interested in generic BASIC programming. A beginning level text.

MicroSoft Basic and Its Files by Jacques Boisgontier. Beaverton, OR: Dilithium Press, 1983. An excellent intermediate-to-advanced text on MBASIC file handling. Has advanced sorting and indexing techniques to make programs run faster where records are accessed. Well translated from the French book of the same name.

The Programmer's Toolbox by Jack Emmerichs. Beaverton, OR: Dilithium Press, 1984. I would call this an advanced text. It's discussion of structured top-down programming and linkable modules would appeal more to the serious programmer rather than the casual hobbyist. The object is to build a series of BASIC library programs that can be linked together to form longer programs. Building the library may seem rather tedious to the novice. Truthfully, I have not had the time to explore this book although the concept is interesting.

Data File Programming In BASIC by Leroy Finkel, and Jerold Brown. 1981. I found this to be a helpful and patient tutorial on BASIC. The tell, do, and review format worked well for me when I needed it most. The book covers elementary BASIC as well as file handling, although the OPEN file characteristics vary slightly from MBASIC. I would recommend this book as a companion to ***MicroSoft Basic — Second Edition*** for the beginning to intermediate MBASIC programmer.

BASIC — Second Edition by Leroy Finkel, et al. I saw this book in the ***SPITE*** catalogue. ***SPITE*** describes it as the "best beginning text on BASIC, period!" If it is set up in the same tutorial format as ***Data File Programming in BASIC***, and you will find it very understandable and interesting, but to be honest I have not read this book.

MicroSoft BASIC — Second Edition by Ken Knecht. Beaverton, OR: Dilithium Press, 1983. This is the standard reference book for MBASIC and should be included in any MBASIC programmer's library for starters.

BASIC Programs for Business — Volume 1 by Charles D. Sternberg. Hayden Book CO, 1980. There is also a Volume 2. I find short variable names to be practical in actual programming, but it makes following the program logic very tedious especially in long programs with many variables. To compensate for the ambiguous variable names, the programs include an index.

Unfortunately, the index is not much better. If you have the desire to know what is actually going on in the programs, you are in for some long deciphering sessions.

Despite all that, these volumes contain some practical programs for business applications such as accounts payable and receivable, payroll, inventory, sales analysis, etc.

The programs were written on the TRS-80 so the file OPEN and FIELD statements are a little different from the Osborne. Most all the programs include sequential and random files. Nevertheless, I copied and debugged my first extensive program in MBASIC from Volume 1.

I would recommend Knecht as the minimum MBASIC reference work. If you are a beginner in BASIC, Finkel and Brown's ***BASIC — Second Edition*** would be a good additional choice. From that point, additional books that include file handling and practical programs can be added from those reviewed above.

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Tongue in Cheek "Languages"

Some other languages we are sure you didn't know existed!

C-

This language was named for the grade received by its creator when he submitted it in a class project in a graduate programming class. C- is best described as a "low level" programming language. In general, the language requires more C- statements than machine code instructions to execute a given task. In this respect it is very similar to COBOL.

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HARDWARE REVIEWS

The Visual 1050 — CP/M 3.0 and Osborne 1 Compatibility

by T. J. Olney

The Visual 1050 is a well-made, attractive, easy to use, desk-top, CP/M 3.0, 128K banked, 2 x 400K drives computer. Some of you may have been exposed to the JS&A offering of the Visual 1050 and for the $500 decided as I did that it would be worth it no matter what.

Well, the machine is great, but for those of us with extensive libraries of public domain and home grown software that run on the Osborne 1, the issue of compatibility quickly rears its ugly head. *[How about the CP/M 3.0 software on the FOG Exec disks? David]*

Not only is the machine disk format incompatible, but one quickly learns that CP/M 3.0 is somehow not entirely "upward compatible" with CP/M 2.2. Further, the terminal emulation of the Visual 1050 is like a DEC vt100 rather than the Osborne 1 ADM-3A emulation. The 25 line screen also causes a few incompatibilities.

For those with a working Osborne 1 double density machine, the disk format compatibility problem is solved in one of two ways:

(1) If you can format diskettes in the DEC VT-180 format using either a program like Uniform or Media Master or DFORMAT on FOG/UTL.040 or a VT-180 machine, you can then use these diskettes as transfer disks. They will work as data disks straight out with the Osborne 1 double density, and the Visual 1050 is supplied with a SETDRIVE.COM program which allows the use of several different formats on it. (The most convenient seems to be the VT-180 format.) Using this format, programs and data can be first transferred to the VT-180 format on the Osborne 1, then transferred to the greater capacity Visual 1050 format on the Visual.

(2) You can get it from either the FOG library on FOG/CPM.037 or the library of the Visual User's Group, there is a version of SETDRIVE.COM called SETVISO1.COM that I have fixed so that it will set the Visual 1050 drives to Osborne 1 DOUBLE DENSITY format. I was able to do this by the kindness of Visual who, while unwilling to spend the time to try to modify it themselves, were willing to send me the source code for SETDRIVE.COM. With a little help from Jack at FOG and a little trial and error, I was able to modify to do the job. With this, you can use all of your old Osborne 1 DD disks without bothering to transfer to the Visual 1050 me-

dium. You will probably want to transfer your most commonly used programs and data, however, as the storage capacity is a full 400K on the Visual and this adds a great deal of convenience.

Visual has agreed that the modified source code be placed in the hands of the Visual 1050 Users Group, c/o Ray Dobbs, 4907 Alburta Rd., Huntsville, Alabama 35816-1103.

For the benefit of others who might want to have compatibility with other formats, I suggest taking one of the seven existing formats and replacing it with the one that you want. In order to do this, you will need to have a structural knowledge of how assembly language programs are written, know how to use your assembler and linker/loader, and know the following.

- number of records per track
- block shift mask (block shift factor,block mask)
- extent mask
- maximum block number (maximum disk blocks)
- maximum number of directory entries
- allocation vector for directory (dir block alloc)
- checksum size (seems to be 16 for 48tpi, 32 for 96tpi)
- physical sector shift

This same information is called by different names in different places. Most of this can be determined by running the public domain program, CPMADR.COM available on FOG/UTL.019. DU.COM in any of its incarnations will supply some of the data as will XAMN.COM. Otherwise, you will have to go to the manufacturer's technical manual and wade through the source codes for the BIOS for your machine.

You will also need to change the "type field of XDPH" as per the instructions in the source code for SETDRIVE.

The trick for which I can give only the advice of "try it" is deciding what to use for the "key for translate table" as it can be 00, 01, 02, or 03. (01 worked for Osborne 1 DD.)

As a final note, KAMAS works well on the machine and the larger disk capacity makes it an excellent idea processor.

JS&A sells the machine bundled with WordStar. The package price is $499. Specially configured for it with all its function keys, Multiplan, DR Graph, CBASIC, and a telecommunications package. It comes with monitor, one parallel port, one serial port, and an excellent Keytronics keyboard.

I tell you all this hoping that more folks (read avid hackers) will buy it and expand the user base enough to get software support now lacking. Non-hackers will enjoy it too, especially first-time users who want a nice friendly front end and labeled word processing keys.

If there are enough Visual 1050 users reading this, then perhaps we should start a FOG section . . .

Happy Computing.

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The Bondwell 2 Computer

by Timothy Perrin

Copyright © 1985

Some months ago, as I struggled to complete a writing assignment in a hotel room using my NEC PC8201, I made myself a promise — my next computer would be the only one I needed for both office work and to use on the road.

I think I may have found the right one in the Bondwell 2 computer, a compact lap portable that seems to fill the bill.

I've been using the NEC as my portable machine for the last year and a half and, though a good stop-gap machine, it has definite problems: the screen was just too small (40 columns by 8 lines); file storage is tiny (64K in my machine); word processing is primitive and there was no modem until I installed one myself.

Other lap portables that had hit the market all came with disqualifying shortcomings. The Data General 1 and its ilk, besides being expensive, run MS-DOS, meaning I would have to duplicate my entire software library in two operating systems (my main machines at home and office both run CP/M). The Epson Geneva, while a CP/M machine, has no disk drive, an 8 line screen, and by the time you add a modem and an adequate RAM disk it gets expensive. Its software comes on chips meaning Epson has the market cornered and the price inflated. Also, you can't patch software on a chip and I like lots of patches in my software.

Last spring, a friend returning from the Japanese Comdex showed me a brochure for the Bondwell 2, a CP/M lap portable he had seen in Tokyo. Made by a Hong Kong company, the Bondwell seemed to be the answer to my prayers. It runs CP/M, had a real disk drive (3.5 in.) and a full-sized LCD screen with 80 column and 25 lines. By Comdex Fall in Las Vegas last November, Bondwell had expanded its market to North America and I finally got to see one of the computers. I bought it on the spot.

The basic Bondwell comes with a single disk drive built into the side of the machine. It has the CP/M operating system, and includes WordStar, CalcStar, DataStar, ReportStar and a scheduler. Options include a 256/512K RAM-disk, a 30 baud modem and a second, external disk drive.

The Operating System

The operating system seems to be a standard implementation of CP/M. So far, all the software I have moved over and tried has run fine, including Smartkey and Write Hand Man, both of which load in high memory and fool around with memory vectors.

Other software I have tested included KAMAS and WRITE, both of which have had no problem with the Bondwell. I've also added a fair number of CP/M public domain staples, including NSWEEP, an extended directory program and a few others. All seem to work correctly.

I've even managed to patch the commercial telecommunications program ReachOut to operate on the Bondwell.

Transporting software is fairly easy because Bondwell has included a fairly comprehensive list of screen control codes and I/O ports in the documentation.

My only complaint, and a pretty technical one it is, is that the IOBYTE is fairly limited. CON: is limited to the keyboard and screen, RDR: and PUN: to the serial port. LST can be assigned to either the serial or parallel port, however. Changes there will have to wait for some industrious assembly language programmer to write new drivers for the BIOS.

The CP/M disk, in addition to having a program for copying files on a single drive machine, has the standard CP/M utilities (ED, DDT, STAT etc.), and several telecommunications programs. Two of these use a Bondwell proprietary protocol so are useful only if transferring files to another Bondwell computer (Bondwell makes an entire line of CP/M and MS-DOS systems).

Another controls the optional 300 baud modem you can install in the computer. There is also a copy of good ol' Modem7, modified for the Bondwell.

The SETUP program lets you reconfigure the serial port for synchronous or asynchronous communication at speeds from 75 to 19,200 baud. It also lets you load up to 16 key strokes into each of the 16 function keys on the Bondwell.

These options can then be stored in an executable .COM file or in a special .KEY file. The key files are used by a special AUTORUN program that autoboots on each disk then lists the program files. When you specify which one to run, if it has an associated .KEY file, it will let you load it.

Software Bundle

The applications software that comes with the Bondwell is garden variety MicroPro material, which means it is fully patchable. So far, I have improved the screen display of the WordStar (vers. 3.30) and patched it for print spooling when printing, both with no problems. DataStar, CalcStar and ReportStar all seem to run as they should.

Due to the slower clock speed of a CMOS CPU (2 MHz versus the 4 MHz in most CP/M machines) some of the software seems to run a bit slow. Spreadsheet recalculation can take a moment but I didn't find the delay intolerable by any means.

The Hardware

The Bondwell 2 packs a lot into a 12 pound package. The main computer has one 3-1/2" disk drive, an 80 column by 25 line LCD display and a full keyboard.

The disk drive uses normal 3-1/2" disks, the same kind as used on the Macintosh and several other machines. After years of careful dealing with 8" and 5-1/4" floppies, the 3-1/2" disks are a joy. Their hard plastic shells make them a lot easier to deal with and a metal slide which protects the disk surface means that you don't have to be as fastidious around your disks. When formatted, they nominally hold 360K of data. Minimum file size is 2K.

The LCD screen suffers from the weakness of all LCD screens: it's hard to read in poor light. However, in good light, it's quite adequate and offers something few CP/M machines do, bit addressable graphics. Unfortunately, there's nothing in the manual about how to use them.

The poor character quality can be remedied by a $300 electroluminescent screen upgrade available from the Axonics Corporation of Salt Lake City. They make EL units for several machines that use LCD displays including the Tandy Model 100, the NEC 8201 and the Kaypro 2000. Though they haven't done a Bondwell as I write this, Rocky Makoff of Axonics says they will be offering EL upgrades for the machine by the time you read this.

The keyboard is very similar to the Model 100 and NEC 8201 keyboards. The caps key and layout are largely the same and the feel is just as good. Its major failing is the inability to access several control characters from the keyboard: ^\, ^], ^^ and ^_. Normally those would not be a problem but several good programs, notably WRITE, do use them. They can be programmed into the functions keys, however, which is an adequate fix.

There are three plugs to the outside world on the back of the computer. The RS-232 serial port and Centronics parallel port both use unusual plugs and interesting pin-outs. However, the manual details which signal goes on which line so making up cables is not impossible. Of course, Bondwell offers cables as well. The third plug is for an optional external disk drive.

Power comes from an internal lead-acid battery that takes about 12 hours to recharge and is supposed to provide about eight hours operating time (though my experience has been shorter). There is no battery compartment and you cannot put in conventional batteries. When the battery begins to get low, the red power light begins to flash and you either have to plug in the power supply (13.8 volts, 1.3 amps) or shut down.

Options

The Bondwell has several available options, some of which slide into a slot on the bottom of the machine.

A 256K RAM-disk is one of those. When it is installed, the computer automatically recognizes that it's there and boots the operating system from a ROM chip on the RAM-disk or from a floppy, as you wish. The RAM-disk is also expandable to 512K by the addition of eight chips and a little soldering. It looks to be a fairly straightforward job for the technically minded, though I must confess that I haven't had a chance to give it a try yet.

A 300 baud modem can also plug into that same slot (meaning you have to chose between a modem or the RAM-disk). It has autodialing software with it but will also run off other telecommunications packages such as MDM7 and commercial packages. (You can hook an external modem to the Bondwell's serial port, but you will need a special cable.)

The machine supports an external 3-1/2" disk drive. When plugged in, the computer automatically recognizes it is in the circuit and designates it as Drive B. (The RAM-disk is normally Drive A when it is plugged in and the internal Drive C. With no RAM-disk, the internal drive is A.) Attempts to access B when it is not plugged in result in a BDOS error.

Documentation

Bondwell's documentation is sparse but adequate. That's not to say that you don't get lots, but most of it is standard CP/M manuals from Digital Research and the MicroPro man-

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uals for the software.

The user's manual for the computer is a slim 110 pages but includes fairly complete information to help you get started. It covers unpacking and setup, the basics of CP/M (file names, wild cards, etc.), how to connect peripherals and the operation of the SETUP program.

There are appendices outlining how to recharge the battery, screen control codes, CP/M logical-physical device assignments, I/O port addresses, memory maps, a trouble shooting chart and specifications.

Conclusion

The Bondwell 2 is a practical, cost effective alternative to both inadequate lap portables and bulky "transportables". A basic system lists at $995 while adding all the options (RAM-disk, modem, external drives, special cables, carrying case) adds another $800.

The software bundle is adequate but nothing that will knock your socks off. The CP/M operating system, which undoubtedly puts some people off, is a bonus. With a RAM-disk, CP/M is everything MS-DOS claims to be. It's a proven system with an incredible array of available software. While not as sexy (to some) as the IBM compatible gimmick ridden products available, CP/M products do get the job done, at a price the rest of us can afford.

Product:	Bondwell 2 Computer
Manufacturer:	Bondwell Industrial Co., Inc. 3300 Seldon Court Units 10/11 Fremont, CA 94539 (415) 490-4300
Price:	$995

[Tim Perrin is a free-lance writer based in Vancouver, Canada. He uses a Morrow MD3 in his office, an Osborne 1 at home and a Bondwell 2 in between. In addition to writing about computers and new technology for several magazines, he also produces what he hopes are among the better manuals for computers and printers.]

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SOFTWARE REVIEWS

Superfile

by David Cloud

I exchanged my typewriter, a reference system of thousands of index cards and a Funk & Wagnalls dictionary for the Osborne Vixen, Superfile and The Word Plus spelling checker. I use these tools for my work as a Baptist missionary and a Christian writer with a publishing ministry in North America and South Asia. Here are my comments on Superfile which I think is fantastic program.

Superfile and FYI 3000

When I decided to find a replacement for the index card filing system I first tried a couple of programs which allowed me to create fields that were similar to electronic index cards. This was better than the card system and I could even put some of the material into the field together with the search information.

But there was a significant limitation in that the field was not unlimited in length and I was severely limited by the variety of search words I could use.

Then I found Superfile by FYI of Austin, Texas. They used to advertise in the ***Portable Companion***. As far as I am concerned, they could have named this program TriplesuperduperFile! It is great; so flexible and simple.

You first type whatever you want into files with a text editor like WordStar or VDO. I mean you can type pages and pages and pages for just one entry. You can dump whole articles into this system, and that is what I wanted.

I didn't want a cross reference system, but a system which actually contained the material I would search for. The beginning of an entry is marked with a **^C** and the end of the entry with a **^K**. After the **^K** you can put as many key words as you want and these become the dictionary created by Superfile. When you finish putting all the key words you want after the entry, you close it with **^E**. Superfile sweeps through the files you have made with the text editor and creates a dictionary and an index file from that. The dictionary is simply the compiled and alphabetized listing of key words you have placed after each entry in the data base. The index tells Superfile where to find the information within the system: what file and what disk. Of course, you must first label your disks carefully and tell Superfile the name as it is loaded.

I'll illustrate this amazing thing this way. I have one filing system developed with Superfile which presently contains 14 (Vixen) disks of information: 5040K of material! We create 60K files (so we can use the other Osbornes to feed into this filing work), then PIP six of these onto one Vixen disk. (I am looking forward to dumping all of this onto a hard disk.)

This particular system is for material related to religious news and views and is therefore titled RNEWS. Since the upgrade to Superfile, FYI 3000, allows the use of 65,000 key words with any one data base, I can put almost two times this much material into this particular data base before it is full. By then a full 15 megabyte hard disk will be required to contain it, which is no small amount of material. I figure there are approximately 2500 pages of information in the data base at this point. Therefore, I can load approximately 7500 pages of text into this one system before FYI 3000 reaches its outer limit. And this is only because we are of necessity using so many different key words.

If the data base were one with which the number of unique key words could be better limited, the data base could be almost infinitely large. With the religious news and views material, though, I desire to be able to search the material by the names of individuals, denomination, organization, etc. Therefore, it is impossible to limit the number of key words.

As I go through the 70 or so periodicals we receive from religious groups, I mark quotes or entire articles I want to put into the RNEWS data base. This material is then typed either by me or a coworker and the key words are put after each entry. For instance, if it is a report, say, of a religious meeting, I will put key words relating to the name of the meeting, organizations and individuals involved, dates, places, topics, etc.

When a disk is filled with entries, it is loaded into the system with Superfile, and a new disk is started. The system can be searched with Superfile by any combination of your key words. You can search for one particular word: John Smith, for example, and Superfile would draw out every entry containing the key word John Smith.

You can narrow the search by combining John Smith with, say, a particular date such as 1982. Such a search would pull from the data base only those entries which contained the key words John Smith and 1982.

You can make the search even narrower by adding another key word, "and" another, "and" another. In other words, the use of "and" narrows the search.

In this way, you can also broaden the search by combining key words with "or" instead of "and". You can search for John Smith "or" Communism. Such a search would pull from your data base every entry which contained the key words John Smith or Communism.

After a search is done, you can output the material in different ways: to the screen, to the printer, to a disk file, to the screen with the option of also putting it to the printer or disk file.

It should readily be seen how efficient and simple this system is. Instead of index cards which contain only a reference to certain material and perhaps the bare bone outline or synopsis of the material (and this includes electronic index card type systems), I now have practically a whole library of material on disk which I can search though in seconds and then read on the screen, print out, or dump to a new file.

There are probably other systems like this, but I doubt you can beat Superfile.

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Superfile's usefulness extends to all sorts of filing projects: inventory of stock or supplies, personnel and address files, material from periodicals, selecting and sorting research material in preparation for an article or book, etc., etc.

For example, the contents of ***FOGHORN*** could quite easily be made into a data base with Superfile since they are already typed on disks. This would only require going through the disks which contain the various issues and putting Superfile's commands *C and ·*K before and after each article, then adding key words after each entry thus created, ending each entry with *E, and sweeping through the whole group of disks with Superfile.

The resulting dictionary and index would allow you to search ***FOGHORN*** s by topic, date, etc., and output the result of such searches in the ways mentioned above.

Remember, FYI 3000 allows 65,000 key words per data base. That's a lot of key words.

Superfile (or FYI 3000) comes with several very helpful utilities. One is for sorting. One allows you to move through a file and split the material to as many as nine different files, leaving the original file intact.

There is also a program with which you can create labels from Superfile data bases. Therefore you can use the program to maintain and print mailing lists of practically limitless sizes.

Another beautiful thing about Superfile is that it uses normal ASCII files created with text editors. Therefore, its data bases can easily be moved from one computer system to another. You might outgrow an 8-bit computer, but not Superfile (or its big brother, FYI 3000).

Superfile is marketed by Software Marketing Associates, 4615 Bee Caves Road, Austin, TX 78746. The phone number is (512) 327-2882.

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PdbM — a New Data Base Program

by Sam L. Brent

PdbM is a new personal data base manager from B.C. Software, 836 Sunset Drive, Livermore, CA 94550 (415) 373-9117 or to order 800-227-7326.

It does everything I ever wanted out of a data base program. It is menu driven and very Osborne user friendly. Setup options are numerous and can be changed by a toggle. There also are lots of printing options, e.g., you can print field names, and the menu allows you to sort alphabetically or numerically. Other commands allow you to delete, edit, find, insert, load, munch, restore, etc.

Setup options make level printing a snap. One option of great value and ease that PdbM allows is the addition of new fields to existing records at any time with selection from menu.

The PdbM storage capacity is very good; it allows over 200 fields/record and over 65,000 records/file.

Error handling is another plus. The program seems to do all the thinking. Within an hour after receiving it, I felt like an expert.

I have found the program useful for mailing lists, inventory, data files, etc. For $89, it is a great buy. The introductory ad appeared in the October 1985 ***FOGHORN*** (page 43).

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MIX C: An Inexpensive, Full C Implementation for CP/M and MS-DOS Microcomputers

by Ted A. Campbell

Raleigh Osborne Computer Club

Summary

MIX C is an inexpensive but full implementation of the C programming language for CP/M 80 and MS-DOS microcomputers. The program will run on the Osborne 1 as distributed, and will run on the Osborne Executive with the addition of an upgraded ROM, or with a public-domain patch to its BIOS.

It offers the advantages of the full implementation of C as described in Kernighan and Richey's ***The C Programming Language***, a good manual with the low price of $39.95.

Disadvantages are the bulky code it produces, and its present incompatibility with standard assembly-language assemblers and linkers.

It is especially recommended for micro users who want to move up from Small-C to a full implementation of the language, at relatively low expense.

Description

MIX C is a new product available from MIX Software of Richardson, TX. It is available for CP/M 80 and MS-DOS operating systems, and in a variety of disk formats.

The package includes the C compiler, a linker, and runtime libraries including the complete C function library described in Kernighan and Richey.

CP/M versions include a second compiler which can produce larger code, if necessary. The package comes with a very complete manual (in excess of 400 pages total) which provides both tutorial and reference sections.

The MIX C compiler produces relocatable code (a file with the extension ".MIX") which must be linked to other routines and functions before it can be executed.

The linker provided offers two options. One produces a very small command file which loads a runtime module which must be present on the disk; the other option compiles the runtime support into the finished command file, which then can be executed without the need of the runtime module, but which takes up considerably more space.

The first option is helpful in developing new programs (since it compiles and links far more quickly), and is recommended for applications in which a number of command files can share one runtime module. MIX Software does not require royalties for programs developed with the package.

The Purpose of the Program

Both the advertising and the documentation for MIX C make it clear that its authors' intention was to provide a scrupulously standard implementation of C as described in Kernighan and Richey's standard text, ***The C Programming Language***. The authors' rigorous attention to this standard results in a C compiler and linker for CP/M machines which will enable programmers to develop code that is easily transportable to other computers.

Transportability has been one of the principal advantages to the C language from early on, but other C compilers for CP/M machines have either not implemented the full standard, or have added non-standard functions which would not transport to C compilers on other computers.

The completeness of MIX C in its following the Kernighan and Richey standard is its single greatest advantage.

Rigorous attention to the standard also explains some disadvantages which users might perceive in the program.

Why, for instance, is there no provision for entering direct 8080 or Z80 assembly language (as the #asm and #endasm statements in Small-C allow)? Because, of course, such code could not be transported to computers that have other microprocessors.

Similarly, why is the MIX C compiler and linker self-contained (i.e., not compatible with other assemblers and linkers)? Because, again, to implement such a compatibility (e.g., with MicroSoft's MACRO-80 package) would be to allow the intrusion of non-standard code into finished programs.

With MIX C, then, you must be prepared to develop your total code in the standard C language, but you have the impressive advantage of being able to transport your code to another machine, recompile and link it there, and expect it to run readily.

You also have the advantage of utilizing C code in books and Journals (***Dr. Dobb's Journal*** is full of it), with a very reasonable expectation that it will execute properly when compiled and linked with the MIX C package.

Osborne Compatibility

The CP/M version of MIX C will operate under either version 2.2 or version 3.0 of CP/M. It will run, as distributed, on the Osborne 1.

It will not run readily on Osborne Executives which have ROM versions lower than 1.21, but there are readily available solutions to this problem. You can purchase the new ROM from OCC, or you can use a program entitled TPATCH (written by Tim Vold and on FOG/CPM.009) to temporarily patch the Executive's BIOS, which will enable the program to run properly.

Originally designed to allow the Executive to run Borland International's TURBO Pascal, TPATCH patches BIOS interrupt routines in high memory, enabling them to save the Z80 alternate registers during I/O routines. Both TURBO Pascal and MIX C rely on these alternate registers.

The disadvantage of using TPATCH is that it must be run once before you use MIX C each time you boot the system, since the BIOS routines that it patches are written in the Executive's ROM, and are rewritten into high memory each time the system is booted.

Documentation

MIX Software has done a very good job of documenting their program. The hefty manual supplied with MIX C (433 pages total in an 8-1/2" x 11" format) includes an initial section explaining how to get the program running, a tutorial that can serve as an introduction to the C language as well as to this implementation, an exhaustive reference section, an equally exhaustive account of the C library included with the package, and a section explaining the compiler, linker, and optimization tools included in the package.

Performance

The price one pays for the fullness of this C package is a relative increase in the bulk of code compiled by it. It is clear that, the fuller the implementation, the bulkier the code must be.

A minimal program that outputs the sentence "Hello, world!" to the screen takes up 1K of disk space when compiled by version 1.1 of Small-C. Small C version 2.1, with its much richer kernel of routines, compiles this same program into a 7K disk file. MIX C, with its still larger kernel of programs, compiles a huge (by CP/M standards) 21K disk file (when using the standard runtime support library).

You should note that there are some tools supplied with the compiler which will optimize this code to a degree. There is, moreover, an alternate runtime support library which promises a considerable optimization of programs which do not use floating-point math, but, as of yet, I have not succeeded in linking the test program to this smaller kernel.

However, even if it is possible to reduce program size by these means, one should expect that code produced by the MIX C compiler and linker will be relatively larger than code produced by C compilers with smaller kernels of routines.

A Recommendation

Many microcomputer users have been introduced to the C language by way of the Small C subset (written by Ron Cain, with a substantial revision [versions 2.x] by James E. Hendrix), which is available in the FOG library.

A constant frustration for Small C users has been the lack of more sophisticated C routines (such as those for dealing with floating-point math, and for declaring certain variable types).

MIX C offers these users an inexpensive means of moving up to a full C implementation, learning its standard features, and producing widely transportable code. It would also serve as a good introduction to the language for those without prior experience with Small C.

Ordering Information

MIX C is available for $39.95 from MIX Software, 2116 E. Arapaho, Suite 363, Richardson, TX 75081, (214) 783-6001.

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A Review of MTBASIC: or "Adidas for the Tortoise"

by Tim Holtwick

While leafing through the ***SPITE*** software catalog, I spied an interesting claim made about MTBASIC from Softaid, Inc. The ad boasted that at last here was a BASIC that acted like a compiled program almost as soon as you had finished entering the BASIC code. As a dedicated MBASIC user, I had to check out the claim and I phoned in my order.

Two weeks later I installed MTBASIC — a simple five minute procedure done once — and wrote my first program in MTBASIC. Within a minute I had a new .COM file on my disk. I was impressed!

MTBASIC was not without limitation, however. It did not support string arrays then, and it still does not support double precision variables for CP/M.

But, many enhancements have been made to the latest version 2.6 which make it quite practical for most operations and supports most commands in ANSI proposed basic in one form or another as well as many extended basic commands.

Nice features like "windowing" and "multi-tasking" are supported by MTBASIC and offer the programmer some powerful possibilities under CP/M.

Best of all, it is simple, and inexpensive at only $49.95 from SPITE Software 1-800-824-7888.

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FindMaster Will Search Through Your Texts

by Veikko Rekunen

I was fortunate enough to get an advance copy of a very good text search program (FindMaster, version 2.23) written in — of all countries — Finland. Not quite that surprising of course, as I am a Finn myself. There is also an English version to be released in the beginning of 1986. (I helped them a little with the language of the English version, but I receive no royalties, in case you are wondering — I only did it as a favor.)

As of this writing I do not know the precise price abroad, but it should sell at something like $100 US. That sounds like a lot, but the program is really worth every dollar.

Any inquiries should be addressed to:

Metasoft Ky
4. Linja 17 C 16
SF-00530 Helsinki, Finland

The program is basically a text search program that will enable you to write your notes with WordStar in any kind of free form you prefer. Your texts may be searched with FindMaster for any specific search words you care to name.

FindMaster is also rather fast. It reads about 33 pages of text a minute (that is about 60K a minute), and it certainly does not spend any time thinking about what it is doing. It operates precisely and, as I pointed out, fast, and has so far been extremely reliable.

At the moment FindMaster will operate in the Kaypros (CP/M), Osbornes, and in some Finnish computers, such as Nokia PC. (As an aside, you might consider them too!) For the MS/PC-DOS supporters there will also be an IBM-PC version to be released in Spring 1986. In case you are interested, the IBM version appears to be twice as fast.

FindMaster is copy protected, but you may make three copies of the program disk in order to create your own master disks, which you can then copy in your own system. A COPY program is included, and the instructions should be clear to everyone. It is preferable to place your FindMaster on your WordStar disk. If you have a hard disk, you may place it where you wish. I have placed it in Drive B User 0 in my Kaypro 10.

When you start FindMaster, you may either start directly or select options. These options include:

* Choosing the name of your search file(s), with full CP/M wild cards supported (so you may choose names like *.TXT or B:*.T?T or A:NEW????.*).
* Selecting user area.
* Selecting the name of your copy file.
* Search window.
* Output direction.

The options can also be saved to a disk file and loaded back, or they may be loaded automatically when the program is started.

All in all, the basic use of FindMaster should be easy for anyone using WordStar, because the editing commands are as far as possible the same.

The search files and the user area options also ought to be clear. One nice feature is that you may select filenames and user areas in a row and thus check whether any particular files do exist in that user area or on that disk.

You may also give your disks individual disk IDs (max 80 characters, 40 characters per two lines, written with WordStar), which FindMaster will display when you start it. This makes it possible for you to place, e.g. the file extension types in the disk ID, so you know what you should search.

And of course you may wish to group certain kinds of files on one disk and give it an ID that will inform you immediately of the kind of files you have on your disk. I for instance have one disk ID that displays the text **Translation texts, Veikko Rekunen.**

When you give the filename or the user area and press ↵ (carriage return), the cursor still remains in the same field. Only when the cursor is in the first position in the field and you press ↵, do you move to the next field.

This makes it easy to search for certain kinds of files from your disk or to correct your selection without having to move back to the previous field.

Thus you may also browse through your disk/user area directories trying to find the files that interest you without having to return to the filename or user area field, if the program automatically moved you to the next field.

It is, however, possible to move to the next or the previous field with ^ (control commands); in this case **^E** or **^X.**

The copy file is the file where you can save any text that is searched for and found. This is easily done with a **^K.** You may also print it to your printer with a **^P.** And if you only press ↵ (or SPACE), the search continues, and nothing is saved or printed.

If you move to a different user area and do not rename your copy file, all the text saved will still go to the copy file in your original user area. If you respecify the copy file name, FindMaster will ask if you really wish to close the old file and open the new one.

There is one serious fault with this copy file, which I believe is due to limitations imposed on the user by CP/M (but I'm not sure!). When you change disks, you must inform the program of it with a **^L.**

But this disk change will destroy the copy file, if it lies on the same disk that is searched. Therefore it is recommended that you place your copy file on the disk that is not changed, i.e., your FindMaster disk.

As FindMaster in its present form takes about 30K, and if you have WordStar and some utilities on the same disk, plus a large copy file (or many of them), your disk might be a little cramped. But this is quite easy to avoid by placing FindMaster on its own disk.

The copy file has another nice feature. It can be edited with WordStar just like any other text file. This is needed if it is to be a part of e.g., a report, for FindMaster will, in addition to the text found, save a heading with the name FindMaster, the name of the file where this piece of text was found, and the number of the search window. You may of course TYPE or use NSWEEP to view the text should you so wish.

There are three different search windows. A sentence is a part of text delimited with either full stops, question marks or exclamation marks. A paragraph is a section of the text which begins with indentation and ends in a hard carriage return (shown with a < flag on the right side of your WordStar screen.) And a header is an area that is delimited with three hard returns on both sides. This also means that the paragraphs written flush left and separated from each other by one empty line are also recognized by FindMaster as paragraphs.

These search windows are, in my opinion, well chosen and also work precisely. The only exception is, of course, mathematical values, such as 34.65, if your search window is a sentence.

Output can be directed in four different ways. The normal option is the screen, in which case you may decide whether you wish to save this particular piece of information to a disk file or print it out straight. You may also choose to send all found search windows straight to your copy file, or you may send them all straight to the printer. And you may also select analysis, in which case FindMaster will only show you if there are any of the search words in the file(s) and how many of them there are.

What makes FindMaster really useful are the relational operators **AND** and **OR**. The **AND** relation is used simply by leaving a blank space between words, whereas the **OR** relation is expressed with a semicolon (;). One thing that must be noted here is that the semicolon MUST be preceded and followed by one blank space, or the search will fail.

Because of these relational operators you may easily search for almost any kind of reference. If you choose the **AND** relation, FindMaster will display every search window that contains ALL these search words, i.e. if you search for:

dBASE WordStar SuperCalc

and select a paragraph as your search window, FindMaster will display every paragraph that contains all three words.

But if you choose the **OR** relation and search for:

dBASE ; WordStar ; SuperCalc

FindMaster will display every paragraph that contains ANY of these words. This **OR** relation is very handy in a highly inflecting language like Finnish, which has many different grammatical forms of the same word (there are no prepositions; we have endings — lots of them!) But even in English it might be useful for finding e.g., all references to men — you would search for:

man ; men

There are no provisions for finding whole words, which I consider a drawback. However, it is so easy to discard the text found but not wanted that this is not a very serious limitation. Thus the search for "man" will also find words like "emanate", "manual" and "German". On the other hand, this is handy, because it allows you to search for any word without having to write all of it.

If you wish to find all references to the word

⇨

"extraterrestrial", you will be rather safe if you search for "xtrater" — they will all be found. There is also no difference between small and capital letters, thus "man" will find words like "man", "Man" and "MAN" equally well.

One more thing. FindMaster will also find the control character (^) in your WordStar files, and thus it may also be used to establish the balance of your print control characters. This is a feature I found out by accident, while just trying out the program. Even this undocumented feature might come in handy to some people.

To sum up. FindMaster is a wonderful program, which — I admit — does cost a bit, but in my opinion is worth it if you are looking for a really good text search program.

The most likely people to need it are people working in research, but many other people, such as translators, secretaries and lawyers will probably benefit from it. It allows you to write your notes with your main tool, your very own computer, and as there are no real faults in the program, I consider it a very good buy.

If you do not wish to contact the firm direct, please feel free to contact me and ask for my impressions. Again I stress that I receive no money for it. My address is:

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Oh KAMAS! Will I Ever Master You?

by Bryon A. McBride

I regrettably write, with WordStar, to voice my disappointment. After hours and hours of trying to master my KAMAS "thought" processor I have only achieved a few essential commands at an automatic level.

I have tried each time to tell myself that I must start over with an open mind and eventually these phrases, terms and expressions will begin to have meaning for me; that eventually a hierarchy of commands will begin to form.

Then I lock up within a few keystrokes and spend an hour trying to find the functional meaning of the command and have yet been able to get myself out of fixes without rebooting.

My "knowledge and mind" is constricting and I literally dread the stupidity and nausea I feel when I contemplate sitting down.

I could have outlined a book on yellow pads in the time I've spent and I have no reason to believe that this process will ever become as easy as WordStar has become to process words for me.

I read an article a few years ago that said if you find yourself feeling really dumb, remind yourself that the documentation is dumb, not you. It is apparent that the documentation is problematic because of both the concept behind KAMAS — which led the authors to write the instructions as categorical concepts not from the standpoint of the processes involved in how the new user will conceive of its use — and the brilliance of the developers themselves — who probably don't understand the mental limitations of those of us who are amateurs and only have IQ's below 130.

This is the error that Persig illustrates in ***Zen and the Art of Motorcycle Maintenance***, to wit: the material is presented in a form that conforms to the thought of the assembler or maker and not to that of the user.

I am not a great or advanced computer person; I have used them long enough to know that most problems solved by them are trivial but solutions take very much time and intelligence by those who are willing or who derive the esoteric satisfaction of computer obsession.

I am grateful for their and your efforts to make "tools", in E. F. Schumacher's terms, but sometimes they turn out for me — an average computer user — to be merely machines.

There is more to this issue than computing — learning and human function must be attended to occasionally. Sometimes the best professional skiers are not good instructors because they have never had the problems of people with normal coordination.

I recommend that they — Kamasoft — sit down (and soon) with a novice or intermediate computer user and write the documentation according to the processes observed.

I feel bad even thinking of criticizing such apparent intellect and effort that has gone into KAMAS, (which is wonderfully intricate with all kinds of levels of complexity). It, KAMAS, ends up presenting me with greater obstacles to its use than the benefits that I imagined realizing, if the work relative to mastery so far is any indication.

Probably the best documentation for getting started and using any software for the amateur was the WordStar that came with my Executive. It is task-focused and is organized so that each time, until I get it through my head, I can quickly get up, find, and work on the document I started and either print or leave it. I am still not sure how to print from KAMAS and I can only get back to the outline I started sometimes. Even following the recommendations of those geniuses who have written to the ***FOGHORN***, I can't seem to get there from here.

The KAMAS documentation did not help much because it was not functionally logical. Functional logic, in my opinion, starts with applications:

- What am I going to want to do first and most with KAMAS?
- Before becoming an expert, how would I approach and solve problems on such a program?
- Numerous examples of applications (not lists; examples) might give me approximations of how to use the program.
- What intermediate leaps of learning are necessary for a person with limited experience to use jexing of whatever it is?
- What difficulties will I have at the beginning including typos of commands?
- How will I fix them?

I really hate to knock anything anyone produces in CP/M but I think the other lunkheads like me need to know to stick to the simple stuff and hope all you other readers will keep solving problems and explaining stuff to us.

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SmartKey — Part 1

by Charles Sandercock

There is a Special Function Key program called SmartKey that allows you to store 3250 characters in and of itself but has power to give you access to virtually unlimited amounts of boiler plate text or program strings.

It works on Microbee, Osborne 1, Kaypro and all CP/M based computers I know of as well as on most 16 bit machines.

In a series of articles I propose to show you how SmartKey can be used. It can fill the void in computers which do not have SFKs and can extend the number of SFKs on computers that already have some. I also will show you how to use SmartKey on any CP/M or 16-bit computer to set up a small but effective data base within a word processor which you can use to:

a. call special formats for texting;
b. call a selected format of a large number of names and addresses;
c. call a selected boiler plate text or program strings.

For instance, by typing \@ I can start a search of an address file containing 80 different names and addresses. I then type in not more than four letters (usually only two) of a particular person's name followed by ↵ (carriage return) and lo and behold I pull into a file, that person's full name and address in exactly the right place for it to be visible through the window of a window face envelope.

If you use dBASE you will say "so what?", but let me see you use dBASE in a WordStar file.

However, we must progress slowly to such things.

My prime usage is WordStar and most of what follows relates to that program, though it is applicable to other programs. For instance, my son has his own set of SFKs for MBASIC.

SmartKey lets you chose the "enabling" key which SmartKey calls "supershift" because what it actually does is use the ASCII character set above 7F (80 to FF) where all characters of the low order alphanumersymbolic set are repeated.

I chose backslash \ as my supershift key simply because I never use it in text. Others might prefer the tilde (~), hash (#), vertical dashes (¦) or star (*).

The supershift key is not lost to you as its original function — press it once and it "enables" but press it twice and it acts "normally".

SmartKey also requires you to choose a "setup" key. I chose the tilde (~) which works the same as the supershift key just described — pressed once it is "setup" but pressed twice it has its "normal" function. On the Osborne 1, the hash (#) may be a better choice as its tilde is the well hidden ^/ (control backslash).

The setup key is used in defining strings but SmartKey also has other ways of doing this which are very convenient.

To define a character string using SmartKey proceed as follows:

1. Press setup (~), and you will hear a bell.
2. Press supershift (\) followed by the key to be redefined, e.g., **a**.
3. Type the string which **a** is to represent, e.g., **^KS^QQ^B1**.
4. Type setup, setup (~).
5. That is all. The screen gives a good display of what is happening and prompts for input.

Having so reconfigured **a**, every time you type it, (using my example), you will save your file, thus avoiding doing **^QR** which is notorious for causing BDOS errors in big files, produce a backup file, place the cursor to the top of the file and reformat the whole file at the fastest speed possible. (Note, I have hyphen help turned OFF. This was done by the WordStar Install program.)

Here are some other SFK that I originally used. The more sophisticated stuff will be saved for later:

1 Reconfigured to **LB**↵ (log to Drive B).
2 Reconfigured to **^KD** (save file).
3 Reconfigured to **^KX A:ENUM**↵ (save file, exit WordStar and call ENUMERATOR — a line numbering program).
4 Reconfigured to **^KR A:-YS**↵ (reads into current file a file

⇨

of name -YS which contains, inter alia, the following: on dating etc.)

Yours sincerely,
SANDERCOCK, SMITH & BEADLE

Charles Sandercock

\% **A:WS**↵ (load WordStar)
\$ **^KS^QP** (save file and return to same place)
\9 Reconfigured to **.LH 8**↵ **.CW 8**↵ **.PO 14**
↵↵↵↵↵↵↵
(This is a format for letters which sets line height to six lines/inch, character width to 12 characters/inch, page offset to deal with a cut sheet feeder, does six carriage returns to "jump" over letterhead and positions the cursor at the "start" position of a letter where the address should go to suit window face envelopes. In truth, this was quickly replaced by something like -YS above and later was replaced by something even more sophisticated as I got to know SmartKey better.)
\8 Reconfigured similarly to \9 but to set a totally different format of line height, character width etc.
\0 Reconfigured to **LB**↵ (log to Drive B).

SmartKey is available from Software Research Technologies, 3757 Wilshire Blvd. (Ste. 211), Los Angeles, CA 90010, Sales: (213) 384-5430; Support: (213) 384-4120, (CP/M SmartKey — $49.95); (IBM and compatibles SmartKey 5.1 — $59.95). If you have trouble, they really help.

Anybody who uses a computer to — in any way — earn income should buy SmartKey. WordStar users will find it wonderful but so too will other software users who need to access the same information often.

Osborne 1 owners who think that they can do all of the above with AVBIOS (which will store 750 or more characters and as a side benefit effectively increases disk space by 15K) should still buy SmartKey. In a later part I will show how SmartKey and AVBIOS can cooperate (the results are amazing.) However I must give full credit to AVBIOS as most of these ideas were originally developed on it and simply transferred to SmartKey. But SmartKey has the additional feature of pausing for input and this is a major advance.

Problems

SmartKey works perfectly on all "plain vanilla CP/M" systems but beware: some CP/M's have been "enhanced" and have a CCP.SYS which no longer fits within the "proper" 2K. Some take up as much as 6K. Many are masked in directories by STAT and can be hard to find. Osborne Executive owners will have this problem but Nick Hammond has solved it. When you order, tell FOG the computer it is to be used on. ZCPR in particular is an enhanced system but a small patch with DDT will solve it.

Lastly, as you get to know and love SmartKey your character strings will get longer and longer. Once they reach 84, they will be coming too fast for WordStar's input buffer and bells will sound and exclamation marks will appear on the screen in massive protest at the speed of input.

Further, if it happens at three in the morning your wife will get out of bed and come and tell you, at great length, about your quality as a husband and father, and her personal and very very certain opinion about exactly where you should place your computer.

However, SmartKey does have an INSTALL program which will let you slow down the speed of output and it can be fine tuned with DDT if you are prepared to be patient (I can now get 169 keystrokes in a string without a bell sounding but I now always test with my finger ready on the reset button.

To whet your appetite for more SmartKey, consider this string:

```
<.^M> <^M^Kb^KrA:@F^M^Qf..L2^M^M^Kk^Ky^Qf..eOT^M^M^Kb
^Qf.EFeOF^M^M^X^Kk^Ky^Qf../LETT^MB2^M^X^Kb^Qf-----^M^M^X
^Kk^Qc^Kc^QfDear^M^M^Y^Qc^M^Kk^Kb^Ky^Oi65^M^I^I^P
^SDEBIT NOTE NO.^P^S^H>
```

What it does is:

a. Calls in a format on a new page on a file to be printed on letterhead paper.
b. Searches back to an immediately previous letter and copies from the top of the name and address to the line below an underlined reference to the beginning of the new page.
c. Locates the line starting "Dear whoever" in that copy on the new page and deletes it.
d. Goes to the bottom of the file and inserts DEBIT NOTE NO. in underlined form and leaves the cursor hovering inside the underlining waiting for you to put in the number.

And it does it all in 12 seconds which is far faster than it could otherwise be typed.

* * * * * * *

SmartBrain from SRT

by Jim Holmes

A while back, it seemed as though the CP/M user was a prime contender for the "endangered species list". Well, we're still around, and there's been a change in the picture. Several firms have put out products just for CP/M, or are including CP/M versions along with their IBM and Apple products.

One of these, SRT (Software Research Technologies, Los Angeles, CA), whose SmartKey program has been called a classic, plans to expand their support of the CP/M community, both by introducing new products and with an aggressive marketing campaign aimed at the end-user and the user group community.

SRT has recently acquired the distribution rights to an outstanding British product called BrainStorm. This is an information processor, which they will sell under the name SmartBrain. In brief, SmartBrain does the work of organizing (and reorganizing) your ideas.

When you plan a project, outline a report, etc., the ideas don't come in an orderly fashion. (Personally, I feel lucky if they come at all.) With SmartBrain I simply start a file, then enter thoughts or data as they come to me. At some point I will have enough to begin organizing it. This is done in an outline structure, but with far more power.

When I decide to group information under headings, a format similar to the one used by outlines is employed. I can nest headings several levels deep, and look at any level from broad overview to an in-depth probe of every category.

Furthermore, SmartBrain is able to remember every reference which may share information and to move about in its data base according to this knowledge. This is done by either SEARCHing for a key or JUMPing to the next/last reference to your current key.

The word key means simply where you ARE, in terms of what information you are looking at. Your cursor is addressable (almost exactly as in WordStar), and you move about by entering information to SEARCH for or asking SmartBrain for more information similar to what you are currently reviewing. A good illustration is my combination address book/appointments calendar.

Suppose I'm looking at an entry in the calendar that tells me, "Aug. 12, '85 — 2:30 pm — call Bob Smith re vendor insurance". I may not recall Bob's number, the last time we spoke, or how much the premium had been for the insurance. SmartBrain will remember any number of facts I already have but can't recall at any given moment. Further, it seems to anticipate my questions, in that it remembers relationships as well.

I could write very detailed memos in my (longhand) calendar... ones that gave me all the facts about the subject of a given meeting or call. The only trouble is, I'd have no time left to make the calls or to attend the meetings if I did. I'd also need an index for each memo. How can I anticipate that Bob Smith will want to know if we have ever made a claim on that insurance, and if so, what were the dates and amounts?

SmartBrain knows.

Suppose I'm organizing a mailing and I wonder if it's worthwhile to sort by zip code for a reduction in the postage — SmartBrain can tell me. If it IS, SmartBrain can also create such a mailing list without disturbing the order of the original data.

Don't think of SmartBrain as a data base, however. Rather see it as a utility which uses a data base or maybe several (it can MERGE data, too). There are some data functions which can be performed by other systems faster (and in less space), but what SmartBrain does best, only KAMAS (to my knowledge) can compare with. I own both, and I prefer the ease of using SmartBrain. KAMAS is a fine product (I did buy it, and would be USING it if I didn't now have SmartBrain), but at roughly half the price and twice the ease to learn, I have to recommend SmartBrain!

SmartBrain is priced at $99.95, but SRT offers group discounts, so have someone from your group contact them if you haven't set this up already. Write to:

Software Research Technologies, Inc.
3757 Wilshire Blvd., Suite 211
Los Angeles, CA 90010

• • • • • • •

GOING INSIDE

Patch your software
to fix a bug or
customize your system.

Speeding Up WordStar

by Gerald Grow

There are some very useful modifications that can be done to WordStar to speed it up. The following, which you may patch in using the WordStar INSTALL program, are especially useful.

In WordStar 3.0, patch these in after all other modifications by answering that all modifications are NOT complete at the end. You will then be asked for location numbers.

In WordStar 3.3, you get into the User Patch area through an UNDOCUMENTED COMMAND. At the 3.3 INSTALL program's main menu, enter a plus sign (+). You will then be asked what location numbers you want to patch. Alternatively, if you know DDT, you can use it to patch your WordStar, but be careful.

I suggest that you try the following patches on a COPY of your WordStar program and see if they don't speed the program up considerably. Best of luck.

	LOCATION		Contents	Change to
	WS 3.0	WS 3.3		
1.	2D2	2B2	40	1
2.	2D3	2B3	09	1
3.	2AE	28E	0A	1
4.	2AF	28F	05	1
5.	2D1	2B1	19	50 or more

Explanation

* Patch #1 above eliminates the "long delay" WordStar inserts when displaying the copyright notice, and at several other points during the program. This speeds things up vastly.

* Patch #2 reduces the amount of time WordStar waits after a keystroke before refreshing the screen. The screen is now redisplayed much more rapidly after a horizontal scroll.

* Patch #3 reduces the delay after a cursor movement.

* Patch #4 reduces the delay after other functions.

* Patch #5: In Help Levels 1, 2, and 3, this patch vastly lengthens the time you have to hesitate before WordStar ties up the screen with help messages from the ^P, ^O, ^K, and ^J help screens. This way, if you hit a ^P, then pause to remember just what you were doing, you have four full seconds to hit the next keystroke before WordStar tries to help you whether you want help or not.

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WordStar 3.3 Patch

In WordStar 3.0, the program will bomb out if you try to move too large a block or move text too far to the right. Since I was doing very large block moves in a special job, I ordered a copy of WordStar 3.3, which fixes this problem. MailMerge 3.3 also adds a very nice IF command, giving you the ability to program Conditional Print statements in the middle of form letters.

Unfortunately, when you install WordStar 3.3 on the Zorba as a Zenith Z-19, WordStar expects the terminal to have highlighting, and as a result, it does not display the block markers properly. Theoretically, you should be able to redefine the inverse-video command to **00** by using the new, expanded, INSTALL program, but I never was able to get that to work.

You can, however, fix the problem using DDT to patch WordStar 3.3 locations 0267 and 026E to 00. Here's how.

With DDT on your master disk in Drive A and a COPY of WordStar 3.3 in Drive B, type:

```
A: DDT B: WS.COM↵
```

Next, type **S267**↵. Your screen will show:

```
-0267 02
```

After the 02, write two zeros, so that the line appears:

```
-0267 02 00
```

Hit the return until the number on the left changes to 026E, and similarly add two zeros at the end of that line, so that it reads:

```
-026E 02 00
```

Now exit from DDT by:

(1) Hitting ↵,
(2) Hitting . (period),
(3) another ↵,
(4) ^C

As soon as you get the A> prompt again, type:

```
SAVE 72 B:WS.COM↵
```

You have now patched WordStar 3.3 using DDT. The block markers <B> and <K> should now work.

WARNING: Most of the "absolute addresses" in version 3.3 are different from previous WordStars. Still, you can get into the patch areas by using the NAMES of those areas (such as HIBIV, etc.), as shown in reference section of the ***WordStar Installation Manual.*** Patching WordStar, however, is not for the faint of heart.

* * * * * * *

Delivery Problems?

Please refer to page 2 for the additional postage charges for First Class and non-U.S. delivery of ***FOGHORN***. **FOG** cannot be responsible for non delivery of copies sent bulk mail.

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Media Master
with Nuevo Upgrade

by Mark Graybill

President, Intersecting Concepts, Inc.

Jack Kryst's notes on modifying Media Master for use with the Nuevo upgrade in the November 1985 ***FOGHORN*** prompted me to add the following bits of information.

The patches shown for the older versions of the program have been incorporated in the version 3.0 we are currently shipping. These patches allow both single sided and double sided O-1's using 40 track drives to use Media Master. Please note that this two byte patch is not compatible with 80 track upgrades, and is version dependent. The assembly language code for the areas of the two patches are as follows:

```
 PATCH # 1                PATCH # 2
POP  D                   POP  D
POP  H                   POP  H
PUSH H                   PUSH H
DI                       DI
MVI  E,080H              MVI  E,0A0H
(change 80 to 88)        (change A0 to A8)
```

As usual, the ***FOGHORN*** is the best vehicle for supplying information to Osborne owners. Keep up the good work!

* * * * * * *

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CALENDAR

Under this heading you will find the listing of activities and events of Affiliated Member Organizations. Listings are the responsibility of the groups' officers. Officers must have corrections into FOG office by the first of the month prior to publication (December 1st for the January issue). For a list of other groups, see *"CONTACTS"* in back issues starting January, 1983, or send a stamped, self-addressed envelope to the FOG offices. Please include a note with your geographical area. To verify the meeting date, time, or location, call the number in the right hand column.

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Apr 21	Soldotna, AK	18-PenFOG	3rd M	7:00pm	Totem Realty, 44669 Sterling Highway	907-262-5801
Apr 21	Anchorage, AK	63-GLOB	3rd M	7:00pm	Horizon Recovery Center Conference room	907-276-6484
May 8	Sitka, AK	83-BUG	2nd Th	7:30pm	Human Services Center, 207 Moller Dr.	907-747-8615
May 13	Ketchikan, AK	89-KCPM	2nd Tu	7:00pm	1182 Black Bear Road	907-225-9249
Apr 26	Homewood, AL	49-FAOUG	last Sa	1:00pm	Homewood Public Library, 1755 Oxmoor Road	205-669-4396
May 8	Huntsville, AL	125-NAOUG	2nd Th	7:00pm	First American Federal Savings & Loan, 4008 University Drive	205-881-0377
May 8	Ft. Smith, AR	23-AFOG	2nd Th	7:00pm	Lewis Paint and Supply, 4900 Wheeler Avenue	501-785-0820
May 6	Tempe, AZ	100-TOG	1st Tu	6:30pm	Tempe Public Library, Pyle Adult Center, Southern Ave at Rural Rd	602-969-2074
Apr 23	Stockton, CA	11-SOG	4th W	7:00pm	Citicorp Savings, Pacific Ave.	209-946-2302
May 12	Fresno, CA	35-FROG	2nd M	7:00pm	1434 West Shaw, Suite A	209-683-2252
Apr 24	Porterville, CA	66-SVFOG	4th Th	6:00pm	1502 North Lowery	209-781-4123
Apr 16	Long Beach, CA	130-OPEN	3rd W	6:30pm	C.S.U., Learning Assistance Center	213-498-4186 x 5350
Apr 8	Campbell, CA	1-1st FOG SV	2nd Tu	7:30pm	Campbell Public Library, 30 North Central	408-371-8699
Apr 24	Cupertino, CA	1-1st FOG SV	4th Th	7:30pm	Cupertino Public Library, 10400 Torre	408-371-8699
May 9	Castroville, CA	5-MBAOCUG	2nd F	7:00pm	Castroville Fire Station, Rec Room, Speegle & Pomber	408-728-1416
Apr 24	San Francisco, CA	2-SFCS	4th Th	7:00pm	St. Aidan's Church, Goldmine & Diamond Hgts.	415-239-1399
May 14	Oakland, CA	3-East Bay FOG	2nd W	6:00pm	B & B Electric, 2832 Ford Street	415-272-9099
May 13	San Rafael, CA	31-MOG	2nd Tu	7:00pm	San Rafael High School, 2nd Street	415-897-0629
Apr 16	Walnut Creek, CA	60-MTDOG	3rd W	7:00pm	Thurman Casey Memorial Library, 2661 Oak Grove Road	415-933-2665
Apr 21	Menlo Park, CA	68-SMOG^3	3rd M	7:30pm	Crane Place, 1331 Crane	415-325-2442
May 5	Menlo Park, CA	68-SMOG^3	1st M	7:30pm	Crane Place, 1331 Crane	415-325-2442
May 12	29 Palms, CA	114-HOG	2nd M	6:00pm	CONFIRM	619-367-9783
Apr 16	Arcata, CA	29-HOG	3rd W	7:15pm	Humbold State Univ., Science Bldg., Rm 126	707-445-2074
May 1	Santa Rosa, CA	56-No. Bay FOG	1st Th	7:30pm	Valley Oak Park Rec Hall, 2600 Northcoast St.	707-526-0250
May 4	Orange, CA	113-NOCOG	1st Su	2:30	Chapman College, Science Bldg., Rm 128	714-952-5627
May 6	Santa Maria, CA	42-SMOG	1st Tu	7:00pm	Sears Savings Bank, 401 South Broadway	805-937-1128
May 8	San Luis Obispo, CA	47-CCOG	2nd Th	7:00pm	TRW, 1050 Southwood Drive	805-528-2382
Apr 29	Santa Barbara, CA	69-OSBUG	last Tu	7:30pm	SB Planning Rm, 105 E. Anapamu St	805-687-8541
May 13	Pasadena, CA	84-OKOK	2nd Tu	6:30pm	Caltech, Winnette Lounge	818-794-3243
May 9	Chatsworth, CA	86-ONUG	2nd F	7:00pm	Wizard of OsZ 20630 Lassen Street	818-709-6202
Apr 22	San Fernando, CA	106-TUG-NET	4th Tu	7:00pm	Church of Christ, 1226 Glenoaks Blvd.(MS-DOS SIG)	818-994-6567
Apr 24	Sherman Oaks, CA	106-TUG-NET	4th Th	7:00pm	Central Savings, 4464 Van Nuys Blvd.(OSBORNE SIG)	818-994-6567
May 1	North Hollywood, CA	106-TUG-NET	1st Th	7:00pm	Valley Plaza Park Community Center, 12240 Archwood(GEN. MEETING)	818-994-6567
May 8	San Fernando, CA	106-TUG-NET	2nd Th	7:00pm	Church of Christ, 1226 Glenoaks Blvd.(KAYPRO SIG)	818-994-6567
May 8	Davis, CA	6-MUGSY	2nd Th	7:00pm	CONFIRM	707-557-5162
May 7	Sacramento, CA	61-SOG	1st W	7:00pm	SMUD Utility Bldg, 1708 59th St	916-456-4139
May 1	Denver, CO	4-DOG	1st Th	7:00pm	Clements Comm. Center 2nd Floor 1580 Yarrow	303-690-6301
May 14	Boulder, CO	65-BUG	2nd W	7:00pm	Colorado Univ. Business School, Rm 101	303-494-8741
May 7	Thornton, CO	85-MIST	1st W	7:00pm	12599 North Colorado Blvd	303-451-0456
Apr 16	Ft. Collins, CO	115-FTCOG	3rd W	7:30pm	C.S.U.Ind. Sciences Computer Lab, 200 W. Laurel, Rm 200	303-226-4156
Apr 16	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647

Continued next page

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Apr 23	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Apr 30	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
May 7	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
May 14	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Apr 23	Danbury, CT	40-DOG	4th W	7:00pm	Qualcorp, Shelter Rock Road	203-775-1102
May 14	Danbury, CT	40-DOG	2nd W	7:00pm	Danbury Hospital Library, 2nd Floor, 26 Hospital Avenue	203-775-1102
Apr 17	Orlando, FL	16-GOOUG	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
Apr 24	Orlando, FL	16-GOOUG	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
May 1	Orlando, FL	16-GOOUG	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
May 8	Orlando, FL	16-GOOUG	each Th	7:30pm	Gard Micro Systems, 7525 Currency Drive	305-847-7031
May 15	Orlando, FL	16-GOOUG	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
Apr 17	Maitland, FL	20-CFLOG	3rd Th	7:30pm	Lake Faith Villas Club Room, Maitland Blvd	305-298-8576
May 1	Maitland, FL	20-CFLOG	1st Th	7:30pm	Lake Faith Villas Club Room, Maitland Blvd	305-298-8576
May 11	Miami, FL	26-GCOUG	2nd Su	1:30pm	F.I.U Tamiami Campus, Building DM, Room 100	305-233-1779
May 8	Ft. Lauderdale, FL	91-FLOG	2nd Th	7:00pm	Harris Computer Sys, 2101 W. Cypress Creek	305-748-7237
Apr 22	Clearwater, FL	46-TBOG	4th Tu	7:30pm	St. Petersburg Times Building	813-584-4185
May 13	Tampa, FL	46-TBOG	2nd Tu	7:30pm	Jefferson High School	813-584-4185
May 13	Tallahassee, FL	77-TCPMUG	2nd Tu	7:30pm	Episcopal Church of the Advent, 815 Piedmont Drive	904-878-4592
May 14	Jacksonville, FL	98-JOUG	2nd W	7:00pm	JEA Bldg, 233 W. Duval Street	904-633-4920
May 5	Athens, GA	81-CP/M Athens	1st M	7:00pm	Athens Microcomputer Center, W. Broad Street	404-353-2127
May 12	Atlanta, GA	93-TOGA	2nd M	7:00pm	Emory University, Chemistry Bldg. Ampitheater, Decatur Road	404-636-1480
Call	Hilo, HI	124-HIFOG	????		Shayne Enterprises, 180 Kinoole Street	808-935-8678
Apr 28	Davenport, IA	102-QCOG	4th M	7:00pm	CONFIRM	319-386-3484
May 14	Davenport, IA	102-QCOG	2nd W	7:00pm	CONFIRM	319-386-3484
Apr 8	Ames, IA	12-Midwest FOG	2nd Tu	7:00pm	(even months) Ames Public Library	515-270-3573
May 13	Des Moines, IA	12-Midwest FOG	2nd Tu	7:00pm	(odd months) Yonker's Computer Depot, 100 Merle Hay Plaza	515-270-3573
May 8	Sioux City, IA	38-SOG	2nd Th	7:30pm	Western Iowa Tech., Room 508	712-252-2182
Apr 27	River Grove, IL	80-CFOG	last Su	1:00pm	College Center Bldg, Triton College, 2000 Fifth Ave	312-654-0986
May 10	River Grove, IL	80-CFOG	2nd Sa	1:00pm	College Center Bldg, Triton College, 2000 Fifth Ave	312-654-0986
May 1	W. Lafayette, IN	34-HOG	1st Th	7:00pm	CONFIRM	317-474-0253
May 5	Bloomington, IN	87-IOU	1st M	7:30pm	Indiana Univ, Cyclotron Facility, 2401 M. B. Sampson Lane	812-334-3234
Apr 22	Wichita, KS	21-OPEK	4th Tu	7:30pm	St. Paul's Methodist Church, 1356 Broadway	316-832-0447
May 6	Hutchinson, KS	137-HUTCH	1st Tu	7:30	Hutchinson Public Library	316-663-7678
May 10	Louisville, KY	64-PCCL	2nd Sa	1:00pm	Univ. of Louisvile, Burhans Hall Rm 202, Shelbyville Road	502-451-0508
Apr 19	Lexington, KY	32-KOG	3rd Sa	12:00n	213 Funkhouser Building, University of Kentucky	606-269-1684
May 12	Baton Rouge, LA	103-FLOG	2nd M	7:00pm	Johnson Equipment Co., 4264 Perkins Road Co.	504-923-0888
Apr 29	Bedford, MA	122-BOG	last Tu	7:30pm	Mitre Corp., Route 62	617-484-1863
May 9	Lexington, MA	122-BOG	2nd F	7:30pm	Honeywell Electro Optical Div, Route 2A	617-484-1863
Call	Silver Spring, MD	96-ERC-OUG	????		CONFIRM	301-622-4400x5331
Apr 21	Portland, ME	136-SMOG	3rd M	7:00pm	Portland Jetport Conference Room	207-772-1616
Apr 21	Dearborn, MI	14-DeFOG	3rd M	7:30pm	Ford Tech Center Cafeteria, 1700 Rotunda Dr	313-626-6641
Apr 17	Ann Arbor, MI	37-TOGA^2	3rd Th	7:00pm	Neuro Science Bldg. Univ. of MI, 1103 East Huron St	313-665-5753
May 13	Duluth, MN	118-DSO	2nd Tu	7:00pm	1440 90th Avenue West	218-626-3344
May 8	St. Paul, MN	111-TCOG	2nd Th	7:00pm	Univ. of MN,St. Paul Campus Rm B-45 Classrm Off Bldg	612-698-0225
Apr 22	St. Louis, MO	55-SLOG	4th Tu	7:00pm	Thornhill Library, 12863 Willowyck	314-991-4399
Apr 29	Kansas City, MO	97-MIZOG	Last Tu	7:00pm	TWA Bldg, 13th & Baltimore	913-491-0690
May 6	Jackson, MS	58-MCPM	1st Tu	7:00pm	R & D Center, Ridgewood Road	601-856-2509
May 12	Charlotte, NC	71-LOGIC	2nd M	7:30pm	Home Federal Savings and Loan, Carmel Road	704-377-1154
Apr 10	High Point, NC	107-TROGIC	2nd Th	7:30pm	(Even Months) High Point College, Science Building, Basement	919-766-5530
May 8	High Point, NC	107-TROGIC	2nd M	7:30pm	(Odd Months) High Point College, Science Building, Basement	919-766-5530
Apr 21	Raleigh, NC	8-ROCC	3rd M	7:30pm	CONFIRM — Dreyfus Aud., Research Triangle Inst.	919-782-9576
Apr 17	Fargo, ND	117-O/KUG	3rd Th	7:00pm	NDSU, Civil Engineering, Room 216	701-280-1700

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Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
May 13	Lincoln, NE	39-Lincoln LOG	2nd Tu	7:30pm	5530 O Street	402-761-3393
Apr 16	Woodbridge, NJ	138-JOG	3rd W	7:30pm	St. James School, Main Street	201-272-2073
Apr 24	Albuquerque, NM	127-AOG	last Th	7:00pm	CONFIRM	505-268-3606
May 13	Albuquerque, NM	127-AOG	2nd Tu	7:00pm	CONFIRM	505-268-3606
Apr 16	Las Vegas, NV	25-VOG	3rd W	7:00pm	CONFIRM	702-452-2544
May 13	New York, NY	135-NYOUG	2nd Tu	7:00pm	73 Franklin Street	212-594-5976
May 4	Liverpool, NY	82-SOUP	1st Su	2:00pm	8371 Red Wing Drive	315-622-9209
May 14	W. Hempstead, NY	88-LION	2nd W	7:30pm	Adelphi Univ Cont Ed Ctr, Room 110, Eagle Ave	516-481-0129
May 13	Rochester, NY	132-FROG	2nd Tu	7:30pm	Monroe County Cooperative Ext. Center, 249 Highland Avenue	716-385-3456
Apr 16	Rye, NY	104-WOG	3rd W	7:15pm	Westchester Federal Savings Bank, 67 Purchase Street	914-725-1098
May 5	Oberlin, OH	9-^Ob^Os	1st M	7:30pm	Oberlin College, Rice Faculty Lounge, W. College Street	216-775-8706
May 12	Uniontown, OH	44-AKCAN	2nd M	6:30pm	13100 Cleveland Avenue NW	216-837-8926
May 14	Cleveland, OH	75-COG	2nd W	7:00pm	United Way, 3100 Euclid Avenue	216-888-2078
Apr 15	Cincinnati, OH	27-COG	3rd Tu	7:00pm	Central Trust Center 6th floor, 5th & Main Streets	513-232-4076
May 6	Dayton, OH	79-DOUG	1st Tu	7:30pm	St. Paul's Episcopal Church, 33 Dixon Drive	513-837-5651
May 14	Oklahoma City, OK	67-OKLOG	2nd W	7:30pm	Southwestern Bell, 111 Dean A McGee, Blue & Gold Rm	405-360-2141
Apr 24	Tulsa, OK	51-OUT	4th Th	8:00pm	Sheridan Library, 62 North Sheridan Road	918-587-3918
Call	Medford, OR	54-RVOG	????		CONFIRM	503-773-1222
Apr 23	Portland, OR	57-PMS	4th W	7:30pm	Bonneville Power Admin. Aud., 1002 NE Holladay St.	503-228-6345
May 4	Eugene, OR	128-LOCUG	1st Su	7:00pm	Farwest Federal Bldg., 96 E. Broadway	503-747-8242
May 10	Philadelphia, PA	121-PhROG	2nd Sa	9:30am	Merck, Sharp & Dome, Sumneytown Pike	215-648-5862
Apr 27	Pittsburgh, PA	50-TROG	4th Su	2:30pm	Mellon Science Building, Duquesne Univ.	412-456-3946
Call	Lancaster, PA	74-LOG	????	7:30pm	CONFIRM	717-285-4940
Apr 17	Lemoyne, PA	92-MIDPOG	3rd Th	7:30pm	One Stop Computer, 65 N. 5th St	717-243-7858
Apr 22	Greenville, SC	41-POGO	4th Tu	6:30pm	C. Douglas Wilson, 201 E. North Street	803-233-3434
Apr 16	Knoxville,TN	13-SMOG	3rd W	7:30pm	(even months) 11505 Kingston Pike	615-483-6857
May 21	Oak Ridge, TN	13-SMOG	3rd W	7:30pm	(odd months) ECS 136 Fairbanks	615-483-6857
Apr 17	Nashville, TN	119-MidTOG	3rd Th	7:00pm	Cumberland Museum, 800 ridley blvd.	615-244-5343
Apr 22	Memphis, TN	15-MOG	4th Tu	6:30pm	Poplar/White Station Library	901-522-1234
Apr 17	College Station, TX	43-AGGNOG	3rd Th	5:30pm	A & A Building, Texas A & M Univ. Room 503	409-845-7770
Apr 16	Austin, TX	7-AEIOU	3rd W	6:30pm	Old Quarry Library off Far West Blvd. 7051 Village Center	512-836-3010
Apr 18	Houston, TX	76-OUCH	3rd F	7:30pm	Univ. Houston, 101 Farish Hall, KIVA Rm. (Use lot 1341 off Cullen)	713-931-1096
May 10	Houston, TX	108-CLOG	2nd Sa	9:00am	Gilruth Rec. Center, Johnson Space Center	713-332-0859
Apr 27	Amarillo, TX	28-POG	4th Su	2:30pm	Downtown Branch Amarillo Public Library	806-355-7509
May 11	Amarillo, TX	28-POG	2nd Su	2:30pm	Downtown Branch Amarillo Public Library	806-355-7509
May 12	Lubbock, TX	134-LOG	2nd M	7:30pm	Texas Tech Univ. Law Bldg., 19th & Hartford Room 202	806-742-3920
Apr 16	Provo, UT	30-KAOS	3rd W	7:00pm	Wiltec Research Co. 488 South 500 West	801-225-8293
Apr 17	Salt Lake City, UT	105-SMOG	3rd Th	6:00pm	Sofshop, 2166 Highland Drive	801-268-2831
Apr 17	Richmond, VA	52-CVOG	3rd Th	7:00pm	Red Cross Bldg, 4th and Main	804-270-4936
Apr 19	Norfolk, VA	78-TOG	3rd Sa	9:00am	ECPI, 3661 East Virginia Beach Blvd.	804-495-1596
Apr 17	St. Croix, VI	70-StCOUG	3rd Th	6:30pm	St. Croix Country Day School Library	809-773-7551
May 5	Tacoma, WA	72-TOG	1st M	7:00pm	Parkland Library (Basement Mtg Rm) 404 Garfield So.	206-752-5582
Apr 16	Federal Way, WA	99-SKOG	3rd W	7:30pm	Highline Comm. Coll, Gold Rm — Bldg 4	206-643-3521
Apr 21	East Wenatchee, WA	10-WOG	3rd M	7:00pm	211 Ridgemont Drive	509-884-3279
May 8	Richland, WA	19-TROG	2nd Th	7:00pm	Richland Public Library, Swift & Northgate	509-967-2430
May 14	Spokane, WA	123-SMUG	2nd W	7:00pm	Komputer Korner, N. 2001 Monroe	509-482-7989
May 5	Milwaukee, WI	22-MilwOG	1st M	7:00pm	Math Bldg. Rm 495, Univ. of W. M.	414-255-0440
May 6	Madison, WI	129-MOO	1st Tu	7:00pm	Univ of WI., 1210 West Dayton Street, Rm B-214	414-887-2036
Apr 16	St. Albans, WV	59-Valley FOG	3rd W	6:30pm	Public Library, 6th Ave. and 4th Street	304-727-8716
Apr 23	Melbourne, Aust	131-VOUG	4th W	6:00pm	(even months) RMIT, Swanson St., Floor 9, Bldg. 12, Rm 908	03-459-8934
May 25	Ashburton, Aust	131-VOUG	4th Su	2:00am	(odd months) Ashburton Public Library, 152 High Street	03-459-8934
May 12	Edmonton, Alta	45-KOG	2nd M	7:30pm	Alberta Vocational College, 10215 - 108 Street	403-464-5088

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Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
May 12	Calgary, Alta	94-COUG	2nd M	7:30pm	616 Macleod Trail S, Seminar room 3,	403-239-5685
May 14	Vancouver, B.C.	17-VPCC	2nd W	7:30pm	Hastings Community Center, 3096 East Hastings	604-298-6990
Apr 15	Victoria, B.C.	48-VICOG	3rd Tu	7:30pm	Canadian Forces Base Esquimalt	604-383-1512
Apr 28	Toronto, Ont	120-OUCT	last M	7:00pm	Parkdale Public Library, 1303 Queen St. W.	416-533-1531
May 13	London, Ont	95-LOG	2nd Tu	7:30pm	Univ. of W. Ont., Elborn College, Room 2130	519-438-7224 x267
May 1	Montreal, P.Q.	73-Microcozm	1st Th	6:30pm	Hillside Armoury, 3 Hillside Lane	514-932-4164
Call	Charlottenlund, Denmark	126-FORMICRO	????	5:00pm	CONFIRM	45-1-631760
May 12	Paris, France	110-OUF	2nd M	6:30pm	Centre Andre Malraux, 78 Bd Raspail	1-544-6216
May 1	Hod Hasharon	33-IOUG	1st Th	6:30pm	21 Hankin Str	052-34043
May 13	Auckland, New Zealand	53-NZOG	2nd Tu	8:00pm	Auckland University, Human Sciences Building, Rm 336	275-4310
May 7	Wellington, New Zealand	109-CROG	1st W	7:30pm	Cafeteria of Trade Span (N Z), 300 Tranaki St.	0064-4-791-172
Apr 15	Edenvale, So Africa	90-JOG	3rd Tu	6:30pm	Civic Centre	011-51-6304
May 9	Hattersheim, W. Ger.	24-AGOG	2nd F	7:00pm	Hattersheim Posthof	061-52-4210
Apr 16	Kaiserslautern, W. Ger.	62-FROG	3rd W	7:00pm	Ramstein Air Base, Ramstein Rec. Center	49-6371-13117
Call	Kronberg, W. Ger.	36-CCD	????		CONFIRM	07304-3274

FOG FONES

System ID	Phone number	Location	Size	Baud rate	When in operation	Notes
FOG office	(415) 755-2000	Daly City, CA	**voice only**		10am - 5:30pm/M-F	***voice calls only please***
FOG #1	(415) 755-2030	FOG Office	47Mb	3/12/24	24 hrs/seven days	
FOG #2	(604) 941-2972	Vancouver, BC	10Mb	300/1200	24 hrs/seven days	
FOG #3	(415) 992-8542	Daly City, CA	47Mb	3/12/24	24 hrs/seven days	
FOG #4	(415) 591-6259	Belmont, CA	10Mb	3/12/24	24 hrs/seven days	technical notes
FOG #5	(415) 424-1482	Palo Alto, CA	10Mb	300/1200	24 hrs/seven days	Officers' Council
FOG #6 (Library)	(415) 755-8315	FOG Office	47Mb	3/12/24	24 hrs/seven days	Uploads
FOG #10	(717) 657-8699	Harrisburg, PA	20Mb	3/12/24	24 hrs/seven days	
FOG #11 (KAY*FOG)	(415) 285-2687	San Francisco, CA	10Mb	300/1200	24 hrs/seven days	message system
FOG #12	(415) 851-7732	Woodside, CA	40Mb	300/1200	24 hrs/seven days	**new number**
FOG #13 (Constitutional Pathway Thirteen)	(405) 848-5317	Oklahoma City, OK	10Mb	300/1200	24 hrs/seven days	
FOG #14	(217) 344-4032	Urbana, IL	10Mb	300/1200	24 hrs/seven days	
FOG #18	(707) 557-4403	Vallejo, CA	46mb	300/1200	24 hrs/seven days	Long Range Planning Comm.
FOG #22	(817) 662-2487	Waco, TX	10Mb	300	6pm - 6am/M-F; 24hrs/S-S	
FOG #23	(615) 292-0710	Nashville, TN	11Mb	300/1200	24hrs/seven days	Epson PX-8 SIG
FOG #24 (SoftStone)	(502) 241-4109	Louisville, KY	10Mb	300/1200	24hrs/seven days	
FOG #25	(319) 326-3904	Davenport, IA	21Mb	300/1200	24hrs/seven days	
FOG #26	(313) 792-7169	Mt. Clemens, MI	360K	300/1200	24hrs/seven days	
FOG #27	(404) 354-0662	Athens, GA	10Mb	300/1200	24hrs/seven days	
FOG #29	(617) 288-4667	Boston, MA	11Mb	300	5pm - 9am/M-F; 24hrs/S-S	
FOG #30	(714) 962-9999	Huntington Beach, CA	44Mb	300/1200	24hrs/seven days	
FOG #31	(415) 692-1406	Burlingame, CA	780K	300/1200	24hrs/seven days	
FOG #32 (FOG*Light)	(408) 971-6536 or (408) 722-5653	San Jose, CA	22Mb	3/12/24	24hrs/seven days	
FOG #33	(415) 655-1206	Oakland, CA	10Mb	300/1200	24hrs/seven days	
FOG #38	(415) 792-3481	Newark, CA	45Mb	3/12/24	24hrs/seven days	
FOG #41	(201) 467-2739	Elizabeth, NJ	360K	300/1200	24hrs/seven days	
FOG #48	(415) 365-2650	Redwood City, CA	23Mb	3/12/24	24hrs/seven days	
FOG #49	(201) 848-8217	Wyckoff, NJ	23Mb	300/1200	24hrs/seven days	

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Recovering Disks with DU

by Martin Willcocks

Does your computer occasionally blow a directory track on a disk? Are BDOS errors on B occurring too often? There may be a hardware problem, and that can be fixed, but what about your blown disks?

I recently had more BDOS errors than usual, apparently caused by an aging monitor, which was interacting with the disk drives and causing disk errors (at least, this was the diagnosis that Xerox made. They replaced the monitor, and also the keyboard on my machine.)

One of the disks that had been blown was the one my wife was learning WordStar on — this didn't please her at all! Another was my accounts disk which I was just updating.

If you know or can discover the file formats on your disks, this need not be the end of the line for those blown disks. There is a public domain utility, DU, which can recover the lost information with a little effort. My version is V7.6, but there are newer versions around — check out the library programs for the current version. (Latest version is on the FOG Starter Disk.)

To use the program, place it in Drive A and type **DUV76**↩, or the name of your version, if different. Place the blown disk in Drive B, and type **LB**↩; this will log you onto the B Drive. Next, type **G00;D**↩ to position the head to the start of the directory track (on formatted disks), and you will probably find the message:

```
++ READ FAILED-may be defective sector ++
```

What you will see, instead of what should be directory information, is some kind of gobbledy-gook — whatever was in the disk buffer before the attempted read. This merely confirms the problem. If you don't get a bad read on track 3, sector 0, your disk probably has enough files to have a directory extending into group 01. Type **G01;D**↩ to read the first sector of this group.

Sometimes the information you see will have been correctly read from the disk, but a checksum error occurred, so the operating system tells you that the data may be bad.

Assuming the worst, what you now have to do is to reconstruct a part, or all, of the directory. First, you have to know something about the way the directory normally looks. You can use DU to examine one of your good disks, or refer to a CP/M text.

Each directory entry occupies 32 bytes of information. DU displays these in two rows of 16 bytes, and shows both the hex codes (as pairs of hex digits) and the ASCII text which corresponds to them. Like DDT, any nonprinting characters are displayed as dots, but unlike DDT, letters and numbers appear for bytes with the high bit set, which makes WordStar files much easier to read.

A typical directory entry looks like:

```
00  0046494C 454E414D 45455854 0000004E *.FILENAMEEXT...N*
10  02030405 06070809 0A0B0000 00000000 *................*
```

The first line contains the file name and information about its length and status. The second line contains the groups allocated to the file. This file has the name FILENAME.EXT; (note that the dot is left out, the eleven letters being contiguous). All the letters should be upper case; CP/M will not be able to erase a file listed in lower case because it translates keyboard input from lower case automatically.

The first byte indicates the user area, 00 to 0F being user areas 1 to 15. For most purposes, this should be set to 00 when recovering a file. An erased file will have E5 here, with a lower case "e" at the first position of the ASCII dump instead of the dot.

The 13th byte indicates the extent of the file. The first extent is indicated by 00, the second by 01, etc. A new extent is opened when the current extent is filled, i.e. when the bottom 16 bytes are all nonzero.

The next two bytes should normally be zero, and the last byte on the line indicates the number of disk sectors occupied by the file, in hex.

There is a simple way to calculate what this should be. Each group has eight sectors, so each pair of groups shown in the bottom row represents 10H or 16 decimal. Up to eight pairs can occur, so this byte cannot be more than 80H, for 128 sectors. Each sector is 128 bytes, so 128 sectors is 16K; any file larger than this must open a new extent.

The last digit of the top line is the number of sectors in the incomplete group or pair of groups coming last on the bottom line. If the last group shown on the bottom line is unpaired, the last digit will be 1 to 8, the number of occupied sectors in that group. If there is an even number of groups shown on the bottom row, the last digit will range from 9 to F or 0, and is 8 plus the number of sectors used in the last group, expressed in hexadecimal. If both groups are complete, the digit will be 0.

The next extent of the file has an additional directory entry, with the same name and user/erased status, but the extent number 01 at the first byte of the fourth group in the top line, and the group allocations in the bottom line as before.

Now that you understand what format the directory is in, you have to reconstruct it. Begin by going to group 2, typing **G2;D**↩ to get there.

You will usually see something recognizable here, such as:

```
.SuperCalc version 1.00....CASH - DISBURSED . . .
```

etc. or the first words of your WordStar text file.

Type **+;D;/8**↩ and the next eight sectors will fly by. If you like, you can stop and restart them with **^S**. However, at the eighth sector, a new disk sector is read, so a short pause will occur.

Look carefully at the sectors before and after the disk read as they will usually contain contiguous text or recognizably follow on in some way. As you go, write down the group numbers which DU shows on the screen. You won't need the track and sector numbers.

At some point you will come to a new title page or a break where the two sectors do not seem to follow on correctly. Go back to the start of the last disk sector by typing **-;D;/8**↩ and then step through two or three sectors at a time using

+;D;/2↵.

Watch for a sector with one or more 1A characters, which are the end of file markers. Note the sector number of this sector, and add 1. Write the result below the group number of this last group. You now have all the data you need for a directory entry.

If you can't remember what the original file was called, call it **FILENAME001**. Compute the number of sectors in hex by counting pairs of completed groups you wrote down. In the example above there are four complete pairs, with the last group having 1A markers in sector 05 of group 0B. This makes six used sectors, plus eight for group 0A, so the total is 14 or E hex. The file length must be 4E.

To enter the data, go to group 00 by typing **G00;D↵** and the first directory sector will be shown (what you were just looking at will probably be shown if the read fails). Then type the line:

CA00,<00>FILENAME001<00><00><00>↵

which will change the first 15 bytes to the correct format (the first <00> after the extension will be <01> for the second extent, and so on). Then type:

CH0F,48,02,03,04,05,06,07,08,09,0A,0B,00,00,00,00,00,00

(17 bytes in all.)

View the changes you just made by typing **D↵**, and you should see a correctly formatted directory entry.

Now, to preserve this, write it back to the disk using the command **W↵**. In all probability, you will get the message ++WRITE FAILED++. If so, just type **W↵** again! This time, you should just get the colon prompt.

Now go back to the group just after the last one you listed in the bottom row — 0C in the example — and continue the procedure just given, to recover the second file.

Remember two additional things: sometimes files get chopped up into different parts of the disk, especially when the disk is nearly full and there has been a lot of revision of the files on it.

A break between two disk sectors that does not continue logically will usually be obvious, but if the last sector of the old group does not end in 1A characters, look for another sector that does carry on where this one left off.

Some files do not use the 1A markers at the end. Instead, you will often see FF followed by a contiguous fill of zeroes. This is just as valid as the 1A fill.

However, MBASIC and .COM files are much harder to reconstruct this way, as it is not as easy to interpret the information in them. And Personal Pearl files have very large areas filled with zeroes in the data directory section. You can see these by looking at a data file with DU or DDT. Text and SuperCalc files and other ASCII-type files are the easiest.

When the reconstruction is done, and you find some files that appear to have no continuation or no start, these are probably parts of old files that were erased. It's good policy, however, to leave them in user area 00 and not change the first byte to E5. You can always erase them later. If they are text files, you can first examine them with WordStar or VDO, then erase those that you don't want with ERA or ERAQ.

Don't name any of the recovered files with the BAK extension. It's OK to use CAL for SuperCalc files, TXT or DOC for text files, or any other standard extensions if you know what the file type is. Instead of BAK, use OLD if you think the file is a backup for a CAL or TXT file. Then you can edit any file on the disk and your suspected backup will not be overwritten. WordStar will not edit files with a .BAK extension.

My WordStar and SuperCalc disks are now back in full operation, thanks to DU and Xerox. A final note; if there really is a bad sector on Drive B in the directory area, FINDBAD will not lock it out. It won't even work at all! But you can still use DU to copy all the good information on the disk to a new disk that has a good directory track.

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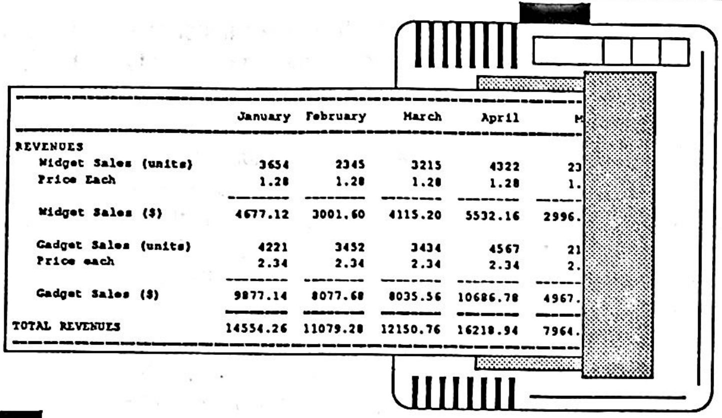

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   Price each                2.34      2.34      2.34      2.34     2.
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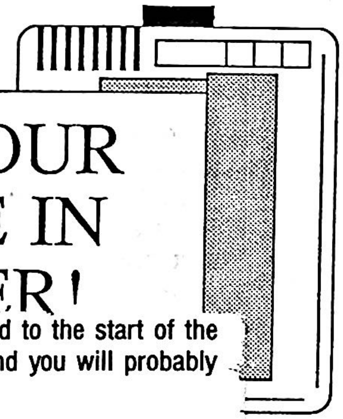

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Next, type **G00;D** ↵ to position the head to the start of the directory track (on formatted disks), and you will probably find the message:

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WRITING TOOLS

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MailMerge Tips

by Alan Chattaway

(1) MailMerge will wrap around to the next line of a data file if it finds the present line is lacking one or more fields. You can take advantage of this to create your data files in a more "human"-oriented form:

```
First name
First address
First city, First code
First country

Second name
Second address
Second city, Second code
Second country

Third name
Third address
Third city, Third code
Third country
```

and then print them in the usual MailMerge way:

```
..Envelope Address File
.po 30
.df MAILIST
.rv NAME, ADDRESS, CITY, CODE, COUNTRY
&NAME&
&ADDRESS&
&CITY&, &CODE&
&COUNTRY&
.pa
```

Note that MailMerge conveniently IGNORES the totally empty lines between addresses!

(2) If you use MailMerge to merge in data at print time, the "print-time line formatter" will automatically reformat the paragraph to maintain justification. If the data you merge in varies in length from one record to the next, you may sometimes get very wide spaces between words.

You can improve this by inserting soft hyphens in some of your longer words ahead of time. Soft hyphens get printed only if they are at the end of a line; otherwise they are left out. This allows MailMerge to start a new line at a better place, by breaking up a word at print time. You need do this only for long words that occur AFTER the merged-in data but BEFORE the end of the paragraph.

To put in a lot of soft hyphens you can type **^OE** (control OE) which makes ALL hyphens soft (until you toggle in back to normal with another **^OE**). However, I have learned that you can insert a single soft OR hard hyphen as follows:

* For the soft hyphen: **^P^-**
* For a hard hyphen: **^P-**

These work as described REGARDLESS of the current state of the **^OE** toggle! Very useful.

* * * * * * *

Proportional Spacing on WordStar

by Tom Hogan

Proportional spacing on WordStar? You betcha, as we used to say in Dakota!

You must have seen the ads from an outfit called Writing Consultants in Fairport, New York, promising to make your WordStar print proportionally spaced type on your very own printer.

The good news is that it works and works pretty much as advertised.

It seems that proportional spacing is actually lurking in the code of your everyday, plain vanilla WordStar; it simply wasn't implemented by MicroPro. The decision was apparently based on the difficulty of making the feature work on the many types of printers available and the fact that using proportional spacing complicates document preparation.

MicroPro may have been right not to implement the feature, but for those willing to do a little work on the WordStar code, and tolerate a somewhat more complicated process of document preparation — you'll no longer "get what you see", and there are some slightly tedious steps involved in entering the text — it does work.

If you have a C. Itoh, Diablo 620, 630, Qume Sprint 5, 9, or 11, or an NEC Spinwriter 3500, 5500, or 7700, Writing Consultants says you can print proportional spacing. I have a Diablo, (actually Xerox) 620 and can attest that it works on the 620. If you have a printer that emulates one of these and uses one of the type wheels supported by the Writing Consultants' patches, you may — repeat **may** — be able to do so.

Here's what's involved.

In WordStar there is a table of values for the width of each character on the printwheel. For most printwheels these values yield incorrect spacing. The kernel of the Writing Consultants' package is a new table of width values, which you install character by character with WordStar's patcher.

Once done, a simple **^P**, (control P) and some other control characters, (depending on your printer), turns proportional spacing on and off. The other control characters do such things as disable hardware-based proportional spacing in some printers.

The patient writer can create proportionally spaced pages with tabular matter, full lines, (including spaces), underlined, and multiple columns.

There are two problems: lines with all caps or centered text and widows — lines with only one word on them. Bad spacing in all caps lines can be corrected with an imbedded ruler that is used to change the margins for the affected line.

Short lines are a different problem. Some printwheels have character positions that do not print and therefore can be used as "dummy" spaces to make the line longer for justifying purposes. On my 620 there are no such "dummy" spaces so the instructions say to use spaces, (press the spacebar), which doesn't seem to me to be nearly as tidy a solution to the problem as Writing Consultants seem to think.

If you are considering P-R-O-P-O-R-T-I-O-N-A-L S-P-A-C-I-N-G from Writing Consultants, contemplate the following: you will receive a book of instructions on how to patch WordStar and prepare text for proportional spacing, not a program on a disk. You will spend some additional time preparing the text and some of the things you'll be doing can be tedious. You will get about 30 percent more words on each page and the program works. As advertised.

[Reproduced from the ***Oracle of Zeus****, the newsletter of the Independent Zorba Equipment Users' Society.]*

[For more on proportional spacing, FOG/CPM.010 has instructions for patching your WordStar. Jack]

* * * * * * *

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Writing Personal Paragraphs Using MailMerge

by W. Terry Whalin

When you first look at the MailMerge lessons, it looks like a great program for writing standardized letter (and it is!).

Don't you just hate getting a letter with just your name inserted after **Dear** and nothing else?

I do.

This article describes a system I have been successfully using for over three years to personalize letters using MailMerge. This type of letter is ideal in my particular work (as a missionary/linguist) where we write to about 50 to 60 people each month.

Basically we want to say the same thing to people yet be able to personally answer any letters. Also I want to write one paragraph that will be particularly for them. In other words, make the letter more than a straight form letter.

Another advantage to this system is that letters can be answered in a single writing session and then printed continuously. All of the letters are written and edited ahead of printing them.

Personalizing standard letters is an easy process using WordStar and MailMerge. I write a standard letter every month called by the name of the month, e.g., DECLET. Note that it is created using the **D** for Document mode. Here is a sample of the dot command information which appears at the top of the file:

```
          BLANK LINE
.. DECLET Instructions follow
.OP
.DF FRIEND.ONE
.RV FIRSTNAME, FILENAME
December 16, 1985

Dear &FIRSTNAME&,

.FI &FILENAME/O&

Body of the letter goes here.

Yours,


Terry Whalin
.pa
```

One important command is the .pa (page advance) command at the end of the letter. This will advance the paper for the next letter. I use continuous form laser cut computer paper and I want the letters to print continuously.

Note the personal paragraph is inserted with the dot command .FI &FILENAME/O&. This is either at the beginning or middle or somewhere in the letter and is the personalized paragraph just to that particular person. It is the opportunity to interact with their letters or say something specific to that individual.

When creating the standard letter, I turn off the justification for the right margin (^**OJ**). A ragged edge looks more natural

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for letters.

Note the **/O** sign after the FILENAME command allows the program to ignore the command if there is no personalized paragraph. This allows for flexibility in the system. Not everyone needs to receive a personal paragraph yet the system will continue to print unhindered.

It is important in the file DECLET that the first line be blank. I don't know why but it doesn't work properly without it.

The second step in the process is to create a file. I call mine FRIEND.ONE. It is is created and edited in the **N** for Non-document mode. I have two fields, FIRSTNAME (for the salutation and possibly placing their name in a paragraph later on in the letter), and FILENAME (which is their last name or something that fits into the CP/M requirement of eight letters maximum). Here is what that file looks like:

```
Tom and June,SMITH
Ron and Esther,SWEEP
Jim and Sally,WESCOT
```

The third file to create in this process is the one with the friend's last name or their particular file name if their name is longer than eight letters — in the example — SMITH. This is created using the **D** for Document mode and with the justification again off for the right margin. Here is an example:

```
(No blank line at the beginning of the file)
How is everything going for you these days? Thanks so much for the
good letter we got from you the other day. How is everything with
your children, John and Mary? Did you manage to sell your farm
yet? Let us know if you get a chance since we are interested. (hard
carriage return here)
(Save with cursor here with ^KD)
```

To get the finished product, I then MergePrint the letter, DECLET. Although the actual computer is a bit complex, it will print the standard letter, taking the first name information from the file, FRIEND.ONE, then from the file insert dot command (&FILENAME/O&), it goes to the personal paragraph with the person's last name and prints that file. Then it returns to the standard letter and prints the rest of it.

I have my list of 60 letters separated into two lists. When the personal paragraph files are on one diskette plus the .BAK files, I have trouble getting it all to fit on one side. You may not have that problem, depending on your disk capacity.

Many of our friends are surprised that we even use a computer for writing our monthly letters, although we make no secret of the fact.

This system is not a quick fix for all your correspondence problems. Letter writing still takes time.

I can easily write the standard letter, edit it, and then write the personal paragraphs to each of our friends in a day-and-a-half or two.

As for printing the envelopes, that we'll save for a future installment. I would be interested in your reaction to how this system works for you. Any improvements would be appreciated.

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Proportional Printing with WordStar

by Thomas Kardos

Most of you are aware that WordStar does not officially support proportional printing. Proportional printing is to typewritten text, what typeset is to ordinary typing.

If you own a daisy wheel printer, capable of 1/120 of an inch movement, this is for you. In most cases this feature may be turned off, so you are not even aware that you have it. To be sure, check in your manual to see if there is a control or other code that deals with 1/120 of an inch spacing, also called **HMI** (horizontal motion indicator).

As the matter stands, MicroPro had difficulties obtaining proportional spacing with WordStar and abandoned it.

Writing Consultants, 11 Creek Bend Drive, Fairport, NY 14450, phone (716) 377-0130 was able to make it work well and they have a simple installation which will permit the full use of proportional spacing with WordStar.

A source article was written in the ***Morrow Owners Digest***, by Chris Wegener, based upon another article in an IBM PC users' magazine. My curiosity got the best of me and I phoned NY and ordered the installation manual ($25).

In less than a week I received it. The manual takes you through a simple installation if you are not a beginner. If you are a beginner or hate to do installations, I suggest that you also purchase an installation diskette ($50) and all you do is answer a few simple questions about the type of printer, type of computer and all is done.

The manual is highly informative on many other features of WordStar, is very simply and clearly written, and allows you some very delicate fine tuning with your printer as you become more experienced.

As you use proportional printing you will enter a new and glorious phase in text printing. On a scale of 10 this product rates a full 10.

The real learning task for you is to decide which page offsets you like with what particular character widths. A few trials with about three lines of text with the variables of page offset-character width and number of characters per line, will in a few minutes provide beautiful text even for the most fastidious among us.

Incidentally, you will spend another $25 to buy a proportionally-spaced printing wheel for your printer. For under $50 you will have incredible printing power.

[A discussion of the proportional space tables in WordStar along with the patching info. is on FOG/CPM.010. Jack]

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RUN THE NUMBERS

All about spreadsheets.

Project Management with SuperCalc

by Curtis R. Allen

It was interesting to read Barry Patterson's comments on project management with SuperCalc in the November 1985 ***FOGHORN***. His application is a very useful one, even for those who have a critical path scheduling program available.

I have eight different packages (two of which run on my Executive) and still use SuperCalc for special Gantt chart displays, particularly when I want to convert bar chart symbols directly to a variety of cost of resource calculation factors from the Gantt chart.

What SuperCalc cannot do is provide the critical path analysis and network reports that are at the core of the CPM/PERT scheduling and the reason for those methods' existence. Until you have used a critical path approach effectively, you aren't doing "project management".

* * * * * * *

SuperCalc Tips: Save Your Fingers from Doing the Work

by Ed Smith

Does your version of SuperCalc (abbreviated SC) have a feature called EXECUTE? Most do. *[Version 1.12 and later do. Jack]* Check by loading SC then looking at the command line along the bottom of the screen. If you see a letter **X** along with the other alphabet letters, you have it. Read on.

What EXECUTE does is take commands from a file instead of from your keyboard. The file is merely a listing of characters all strung together (including RETURN, TAB, etc.) which you ordinarily would have to type one by one when giving your commands to SC.

So what can it do for you if you have it? Here's an example using the file BRKEVN which you all received on your SC disk.

First, you must list the things you want SuperCalc to do for you (you construct the Execute file). This is done using WordStar in the N (non-document) mode or even easier, with VDO (or VDOX or VDE-2C) or any other text editor.

The listing below is at the left, with an explanation of each command to the right. You would not type the explanation. We'll use a file name of: TEST.XQT for the example.

```
/LBRKEVN,A      LOAD the file BRKEVN — ALL of it
=B3             Move cursor to location B3
9.95            Insert the digits 9.95 in B3
=B6             Move cursor to location B6
2000            Insert 2000 there
=B7             Move to B7
2500            Insert 2500
=B8             Move to B8
450↩            Insert 450 — carriage return
```

Now save this file. Next load SuperCalc and type:

```
/X,TEST         LOAD the file TEST
```

SuperCalc will load the BRKEVN spreadsheet and automatically load the figures into the proper cells.

Why bother with EXECUTE when someone must type these entries into a file anyway? One reason might be if you expect to have an untrained user entering new or additional data into a spreadsheet. In that case you wouldn't even be sure they were loading the correct spreadsheet into the computer memory, let alone placing the new figures into the correct cells.

But a great feature of EXECUTE is a feature allowing an operation to stop for keyboard entry. Here's how that would work.

To suspend automatic operation of an XQT file and "unlock" the keyboard for data entry, just place an ampersand (&) in the XQT file. A message will appear on the screen at that point saying "Awaiting keyboard entry". The user types in the data, then another ampersand to begin automatic operation again. Let's see how that would work in a file similar to TEST.XQT above:

```
/LBRKEVN,A
=B3&  When screen asks for it, type in data -->  9.95&
=B6&   ..   ..     ..     ..  ..  ..             2000&
=B7&   ..   ..     ..     ..  ..  ..             2500&
=B8&   ..   ..     ..     ..  ..  ..             450&
↩
```

As you see, the untrained operator need not know how to load a file or move the cursor if he/she can accurately type in individual items from a list of data whenever the screen asks for it. (Also good if you use a file only occasionally and might be hazy about its use months from now but are quite familiar with it just after you set it up.)

Incidentally, if you originally load SuperCalc at the A> prompt with the command: **SC.TEST**, your computer will automatically issue an Execute for you, load your worksheet and make the entries too, unless you are using ampersands.

One last item about SC. I myself find it just as easy to create the Execute file using SuperCalc rather than WS, with each of the commands above written on a separate SC row, but all in column A. You save your SC file with the OUTPUT command: **/O** and use **FILENAME.XQT** as the file name and extension.

The borders must also be removed before saving to disk. This is done using the command: **/G,B** (but don't forget to write down the RANGE you will wish to save because you can't see the range after you remove the borders). *[You can forget about the RANGE and enter "ALL" instead. David]* The se-

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quence used is shown below:

/G	The GLOBAL command
B	BORDERS are to be removed
/O	The OUTPUT command
D	Use DISPLAY rather than cell CONTENTS
A1:A9 or **ALL**	The RANGE is cells (lines) 1 thru 9 of column A or ALL of file
D	Save this file to DISK
TEST.XQT	The file to be saved is named TEST.XQT

and the Execute file is on your SC disk where you will be using it rather on a WS disk from which it would have to be copied.

[It's a good idea to /save it as a CAL file also, so that you can make changes. The /output to disk will yield a XQT file that cannot be reloaded into SC. David]

[Note: This article was sparked by a short item by Fritz in the Dallas Osborne Group Newsletter and augmented by the author for your use.]

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Tongue in Cheek "Languages"

Some other languages we are sure you didn't know existed!

FIFTH

FIFTH is a precise mathematical language in which the data type refers to quantities. The data types range from CC, OUNCE, SHOT and JIGGER to FIFTH (hence the name of the language), LITER, MAGNUM and BLOTTO. Commands refer to ingredients such as **chablis**, **chardonnay**, **cabernet**, **gin**, **vermouth**, **vodka**, **scotch**, **bourbon**, **Canadian**, **Coors**, **Bud**, **Everclear** and **What Ever's Around**.

The many versions of the FIFTH language reflect the sophistication and financial status of its user. Commands in the ELITE dialect include **VSOP**, **Lafite** and **Waiter's Recommendation**. The GUTTER dialect commands include **thunderbird**, **ripple** and **house red**. The GUTTER dialect is a particular favorite of frustrated FORTH programmers who end up using this language.

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MANAGING DATA

Covers data based management programs.

Printing Labels with Perfect Filer

by Bert Harvey

I reviewed a label maker program written in Perfect Filer a number of months ago and find it to be easier than MailMerge.

It also has the additional advantage of printing multiple copies of the same labels — it will continue to spit out duplicate labels till you say stop, i.e, **ESC**. This is handy when making labels for creditors that show up each month. I use it for my suppliers at my office that must be paid each month and I print up a year's worth at once. Here it is again:

* Put Perfect Writer in Drive A and Perfect Filer in B.
* Create a new file: **B:LABEL.MSS** and enter your creditors' name and address in up to six lines (enter carriage returns to make a total of six lines).
* Do not include the angle brackets around each entry.
* Put filer in Drive A.
* Call up the "Generate Mail" option, select 1-across labels, subset "All Members".
* The input file is LABEL.MSS and your printer will take off.
* Stop everything with **ESC**.

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Locate a Character String in a Field in a Large dBASE II File

by Dave Luehring

Ever have to locate a character string which is believed to appear SOMEWHERE in a particular field in a large dBASE II file?

Assume we have a file of aircraft ownership information:

```
Structure for file: B:ACFT.DBF
Number of records: 01705
Date of last update: 12/17/85
Primary use data base
Fld       Name      Type Width     Dec
001       REGISTR   C    005
002       SERNO     C    015
003       MAKE      C    011
. . . etc.
```

(Other fields contain things like owner name and address.)

Now assume we get a report that aircraft 423 went in the water. We want to know whose aircraft it is. The only trouble is, the number may be N423, Nx423, Nxx423, and so on.

To find the record in the file using dBASE alone we could:

INDEX ON $(REGISTR,3,3) TO SCRATCH

and then we could see if dBASE locates the record using that index file. If that's unsuccessful, we could **INDEX ON ($REGISTR,2,3)**, try again, and so on.

There's an easier way!

CREATE a file called WORK which has just one field:

```
Field          Name, Type, Width, Decimal places
001            registr,c,005
.USE WORK
.APPEND FROM ACFT. Then —
.SET ALTERNATE TO WORK      )This creates a file called
                            WORK.TXT
.SET ALTERNATE ON           )
.LIST                       )
.QUIT
```

Now all you need to do is edit WORK.TXT and use WordStar's **^QF** (control QF — find) function to locate the string you want.

Voila! We get the entire registration number and the record number.

Delete this file, exit WS, reenter dBASE and find the record with ease now that we know the entire contents of the field we're looking for. In a matter of two to three minutes we know whose airplane it was.

Brute force and awkwardness? True. But it works fast.

* * *

dBASE II Upgrades to Latest Version 2.43*

from FOG Tech Support

A letter from a user prompted this article about the correct procedure for obtaining updates to your dBASE II program.

These are the steps:

- If you are not a registered user, or if you are not sure if you are or not, request a software registration card from Ashton-Tate.
- Make a photocopy of your ORIGINAL disk showing the label with the serial number, and include a copy of your proof of purchase.
- Send those photocopies to Ashton-Tate with your check for the upgrade fee.

UPDATE PRICES: (in US funds drawn on a US bank)

If you currently have version:

2.3b

$75Within US — UPS shipping
$90Within US — DHL (3 days)
$100in Canada — DHL (only)

2.4

$50Within US — UPS shipping
$60Within US — DHL (3 days)
$75in Canada — DHL (only)

2.41 (purchased before Dec. 1, 1984)

$25Within US — UPS shipping
$35Within US — DHL (3 day)
$40in Canada — DHL (only)

If your product was purchased after December 1, 1984, the 2.43* update is at no charge. Please include a copy of your bill of sale with requests for free updates. If you don't have the registration card with your software, be sure to include a photocopy of your disk label/serial number. Direct correspondence to:

Ashton-Tate Customer Service
dBASE II Update
10150 West Jefferson Blvd.
Culver City, CA 90230

It is probably not a good idea to phone, since you will not be able to get any answers, and will likely wait on hold for 10 minutes or more to find that out. It wouldn't hurt to send your update request by certified mail.

* * *

dBASE Date Tedium and Simulated Arrows

by Mel Huey

After coming to dBASE II from Perfect Filer one of the few things I missed was automatic display of the last date entered. I move in and out of a lot of programs during the day and get tired of constantly typing the date.

To solve this problem I wrote two interacting programs. The first is called AGAIN.CMD and it restores the last date entered from a memory file. AGAIN queries you if the date is correct. If not correct START.CMD is called in to enter a new date as numbers. START also converts the date to words and a sort date in the form YrMoDay. Sort dates are useful to index files by date.

```
* AGAIN.CMD
SET TALK OFF
RELEASE ALL
ERASE
RESTORE FROM TODAY
```

Here is the memory file TODAY.MEM:

```
disp memo
ANSWER      (L)  .T.
WORK        (C)  10/29/85
SORTDATE    (C)  851029
TODAY       (C)  October 29, 1985
** TOTAL **      04 VARIABLES USED   00030 BYTES USED
@ 5,5 SAY '***********************'
```

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```
@ 7,5 SAY '*** IS TODAY    ' + TODAY + '?   ' GET ANSWER
READ
IF .NOT. ANSWER
   DO START
   * (Start is listed below)
ENDIF
SET DATE TO &WORK
**   This little set command sets the predefined variable DATE()
*    to the value of WORK so you don't have to manually enter it
*    when you load dBASE.
RELEASE ALL
. . . .
* THE DATE ROUTINE ENDS HERE. My program goes on to display my
* DBASE master menu. I know it seems strange to release all
* after all this work, but some of my programs call it in with
* RESTORE FROM TODAY.
```

Here is the START.CMD that may be called in by the previous program.

```
* START.CMD
RESTORE FROM ARRAY
```

This is what ARRAY.MEM looks like. It would probably have been better programming style to have done this with store commands but I was carried away with using SAVE at the time. Besides this can almost make you believe dBASE has arrays.

```
. disp memo
M01          (C)  January
M02          (C)  February
M03          (C)  March
M04          (C)  April
M05          (C)  May
M06          (C)  June
M07          (C)  July
M08          (C)  August
M09          (C)  September
M10          (C)  October
M11          (C)  November
M12          (C)  December
** TOTAL **       12 VARIABLES USED   00086 BYTES USED
```

```
STORE F TO ANSWER
DO WHILE .NOT. ANSWER
   STORE '00/00/00' TO WORK
   ERASE
   @ 7,10 SAY ''ENTER TODAY'S DATE IN NUMBERS'';
    GET WORK PICTURE '99/99/99'
   READ
   STORE $(WORK,7,2) + $(WORK,1,2) + $(WORK,4,2) TO SORTDATE
** Here is where we call in an array index
   STORE 'M' + $(WORK,1,2) TO M
   STORE &M TO MONTH
**
   STORE $(WORK,4,2) TO M
* M is doing double-duty to avoid introducing another variable
   IF $(M,1,1) = '0'
      STORE $(M,2,1) TO M
* this IF cuts out the crudity of October 05, 1985
   ENDIF
   STORE MONTH + M + ', 19' + $(WORK,7,2) TO TODAY
   ?
   @ 14,10 SAY '***** TODAY IS : ' + TODAY
   @ 16,15 SAY ' WITH NUMBERS THIS IS ' + WORK
   @ 20,25 SAY '**** NOW IS THE DATE CORRECT ??? ' GET ANSWER
   READ
ENDDO
RELEASE MONTH,M,M01,M02,M03,M04,M05,M06,M07,M08,M09,M10,;
M11,M12
* This rids memory of everything that isn't going into TODAY.MEM
SAVE TO TODAY
RETURN
```

START could be made even more resistant to errors. Note that if you enter a month larger than 12 or use a space instead of a zero before a month less than 10 the program crashes. Since I'm the only one using it, I haven't bothered.

As you can see array-like structures are a bit primitive in dBASE II, but it can be done. This example uses data from a prewritten array. The same procedure can be used to load an array with new data. For example, with an array of S1, S2, S3 . . . you can load data to a specific index "X" with a line such as:

```
STORE <data> to S&X
```

Finally, I want to mention the article in the April 1985 ***PROFILES***. There a dBASE program is presented that will access the real time clock in the 4-84 model Kaypros. I would recommend you use that program only if you have a real time clock, despite the author's claims.

[Reproduced from the EugeneKUG Newsletter, October 1985.]

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Using dBASE II to Print Out a Work Order Form

by Ed Lukert

I use dBASE II extensively at the office to track jobs from the time a job request is filled out until the department is billed and a monthly manager's report summary is sent.

The file structure includes an ID number; job number; received, due and completed dates; department number; person requesting the job and telephone number; etc.

Using menus and CASE commands the system prints a JOB IN PROGRESS REPORT listed by due date and MANAGEMENT JOB COMPLETED REPORTS by department which summarizes costs and totals the monthly cost for the department. These reports are generated using the simple REPORT formats.

In addition the system permits adding and editing records (to enter completions dates, hours, costs, etc.), and a searching mode which permits finding a record if you can remember anything about it, such as a name, department number, date or any other field information.

In order to get a job underway without waiting for entry of data, the person in charge of traffic control would write in the data from the request form on a preprinted three-part WORK ORDER, assign an ID number, attach it to the work folder, Xerox the form and send the WORK ORDER on its way. The Xerox copy would then be used for data entry into dBASE II. We really had good records, but the labor involved in writing and data capture was not very efficient at all. In addition, the three-part WORK ORDER form was not inexpensive.

So several weeks ago, when we were running low on WORK ORDER forms, I decided to see if dBASE II could accept the input data into the file and print out a WORK ORDER form with the applicable data with specifications and space for entries as the job progressed through our department.

Three-part blank tractor paper was no problem but setting the FORMAT TO PRINT was a new challenge for me. I knew it could be done, but I had never attempted it.

Printing labels was no problem, but I guess I never really understood the difference in FORMAT TO PRINT and SET PRINT ON commands. Adam Green, dBASE expert and author, states that the distinction between FORMAT files and COMMAND files is a fine one and mostly a matter of personal taste.

In my opinion, that's not true. Although the COMMAND files use the **?** and can do a certain amount of formatting; a FORMAT file, which uses the **@ x,y SAY** "expression or data", is really the ticket for producing a combination form and report.

I tried to use ZIP to write my FORMAT program, but got lost. So I sat down with a word processing ruler and determined the coordinates of each item I wanted printed on the form and wrote the first version, some of which looks like this:

```
@ 3,3 SAY ''DUE:''
@ 3,16 SAY DUE
@ 3,58 SAY ''ID#:''
@ 3,65 SAY IDNO
@ 5,3 SAY ''RECEIVED''
@ 5,16 SAY RECD
```

You can see how the coordinates fit a title like DUE: just in front of the data in a field called DUE, or ID#: in front of the data in a field called IDNO, etc. For identifying spaces where entries are to be made by hand, I used ----'s and for vertical lines I used the : symbol as shown below:

```
@ 40,3 SAY ''----------------------------------------''
@ 40,43 SAY '':---------:---------:---------:''
@ 41,43 SAY '':         :         :         :''
@ 42,3 SAY ''INHOUSE REPRO:''
@ 42,43 SAY '':         :         :         :''
@ 43,3 SAY ''----------------------------------------''
@ 43,43 SAY '':---------:---------:---------:''
```

Of course I had to make a few changes after printing a test file, but it finally printed out all the data and spaces required.

Now for the fun. To make the final form look like a form, I wanted to have the title in expanded/compressed/double-strike print, then go to double-strike pica for the heading information, italics for the specifications (items to be circled) and plain pica for the remainder of the form until reaching the bottom where Date Completed, Purchase Order Number, Job Cost were to be in double-strike.

Giving ASCII codes to a printer using BASIC is well documented in printer manuals; however, sending those codes from within a dBASE program was something else. Through trial and error I found some interesting things.

1. To eliminate extra form feeds, use **SET EJECT OFF** and do not send any printer reset commands such as **<ESC> CHR$(64)** which would be the BASIC language sequence. I found out that the reset automatically gives a form feed — most undesirable in the middle of your form. Use a command specifically designed to turn off the print mode or use a MASTER SELECT combination which automatically turns off the previous mode.

2. To send ASCII codes from dBASE to the printer, you must use the command **SET PRINT ON**. Believe it or not, you can have the SET PRINT ON command active at the same time you are using **SET FORMAT TO PRINT**. That trick saves a lot of mistakes — just turn them both off at the end of the program. The SET FORMAT TO PRINT will only read lines starting with an @ while the SET PRINT ON will only read lines starting with a **?**.

3. With the SET PRINT ON command active, ASCII codes are sent to an Epson FX-80 printer as follows:

```
SET PRINT ON
SET FORMAT TO PRINT
*  Turn on expanded/compressed/double-strike print.
     ?  CHR(27)+CHR(33)+CHR(52)
     @  1,20 SAY ''PUBLICATIONS WORK ORDER''
*  Turn on double-strike pica print.
     ?  CHR(27)+CHR(33)+CHR(16)
     @  3,3 SAY ''DUE:''
          etc.
*  Turn on regular pica print.
     ?  CHR(27)+CHR(33)+CHR(2)
          etc.
```

Note the difference in the dBASE **CHR( )** and the BASIC **CHR$( )** ASCII representation. Also note that dBASE requires a + to connect multiple ASCII codes whereas in BASIC you can just string them together.

Now that I've put it down, I have a hard time understanding why it took me so long to figure it out, but it did. Now that the form works, data is entered on each job and a form printed when the ID number is entered at the print prompt. I can only hope that these tips can save you a similar amount of trouble if you face the same challenge.

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dBASE II Data Base File Structure

by Jim Holmes

[I'm still a novice in dBASE II. I think, however, the article below is worth reprinting in full. It's from the April, 1984 newsletter of VCC (the Valley Computer Club, Burbank, CA), and was written by Wayne Turman.]

The following file structure is used by Ashton-Tate's dBASE II data base files, i.e., those with the extension .DBF.

Knowing what this structure looks like can often be of help, e.g., the manual tells you that to change field names you first copy the data to an .SDF file, create a copy of the structure, then using that copy, modify it and copy in the data from the .SDF file.

This can take time on a large file. I can use DUU.COM or CDUMP.COM or a similar utility to go into the file and change field names in a few moments. You'll think of more uses.

Note that all the locations and values are given in HEX, unless decimal is specifically indicated.

Location	Description
00	This byte is always 02; that's how dBASE knows it is a .DBF file. Try changing it and look at the message.
01-02	Record count
03	Last update MONTH
04	Last update DAY
05	Last update YEAR
06	Record length (includes 1 extra for delete code).
07	Always 00

This 16 decimal byte area is repeated until an 0D is found as the first character of the field name, or 208 is reached.

This explains the 32 decimal field limit in dBASE II.

08-11	Field Name
12	Always 00
13	Data Type (43 = C, 4E = N, 4C = L)
14	Field Width
15-16	Starting address of this field in buffer at 6CD1 where dBASE does its work on records.
17	Number of decimal places in field.

— — — — — — — —

208	Always 00
209	Start of data base records. This is 1A if there are no records in the data base; otherwise, it's 20 when no record has been deleted, and is 2A if a record has been deleted. There are no delimiters in the records. The first byte past the last record is 1A.

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PROGRAMMER'S

Handy items when working with the language of your choice.

TOOLBOX

An MBASIC Tip

by Steve Brammer

For those of you who, like myself, do frequent programming in MBASIC, an occasion often arises where the ability to display a message on the screen in a given row and column would be very convenient. However, to the best of my knowledge, MBASIC does not have a 'LOCATE', 'HTAB' or 'VTAB' command. Recently, I found a definable function which would solve the dilemma. (Actually, someone else found it and showed it to me. This works on any computer that uses standard ADM-3 type cursor addressing (such as Kaypro and Osborne).

```
10 DEF FNLOC$(X,Y)=CHR$(27)+CHR$(61)+CHR$(X+31)+CHR$(Y=31)
20 PRINT CHR$(26):REM CLEARS THE SCREEN
30 PRINT FNLOC$(10,5);''TEST LINE''
40 END
```

Line #10 defines the function to position the message. Line #30 displays the message, "TEST LINE", at row=10 and column=5.

[Taken from an article for the KUGNJ CP/M Special Interest Group; KayPro Users Group of New Jersey, Roosevelt, NJ 08555-0364.]

• • • • • • •

dBASE II — Some Differences

by Veikko Rekunen

When I had the Osborne 1, I used dBASE II version 2.3b. I wrote a rather simple command file for writing my students' names on special forms needed for my work on my Star Gemini 10X printer.

The problems started when I bought the Kaypro 10. My printer is still the same, and it still connects to my computer through the Centronics interface. dBASE II version number is 2.41. And surprise, surprise! The command file does not work anymore.

It still prints the first 20 names in the correct places, but with the 21st, the print head goes to the extreme right and then returns in the wrong horizontal position. After that each student's name is written with HUGE empty vertical gaps in between. These gaps widen all the time, and if there are many names, finally you can only fit two or three on one page.

What really astonishes me is the fact that in the earlier version things worked beautifully, but in this later, supposedly more advanced version it does NOT work, though the command file is exactly the same.

Below is the part of the command file that should do the actual printing. I had to adjust my printer's line feed because the printed forms do not conform to ANY standard. If anyone out there could offer some kind of explanation, I'd be most grateful.

I have, with help from my dealer solved the problem by replacing the @ **X,Y SAY** commands with another method, which is also presented below. This includes setting and resetting my printer's page length between 34/144 and 36/144 of an inch, and printing each student's name on a "new page" (by sending a top-of-form command).

If ever you have problems with the @ **X,Y SAY** command when printing, try this approach.

Part of the Original dBASE II Command File:

```
SET MARGIN TO 1
SET FORMAT TO PRINT
SET PRINT ON
?? CHR(27)+CHR(56)
?? CHR(27)+CHR(69)
?? CHR(27)+CHR(51)+CHR(7)
SET PRINT OFF
@ 1,1 SAY "     "
WAIT
@ 6,10 SAY school
@ 6,55 SAY ter,
@ 13,8 SAY form
@ 13,12 SAY idletter1
@ 13,13 SAY idletter2
@ 13,25 SAY course
@ 13,36 SAY period
@ 13,45 SAY date
@ 17,15 SAY thissubj
@ 17,47 SAY teacher
USE students
GO TOP
STORE 26 TO row
STORE 1 TO counter
DO WHILE .NOT.EOF
   DO CASE
    CASE thisform=form .AND. (idletter1 = id .OR. ;
idletter2 = id)
     IF thissubj $ subjects
      @ row,5 SAY name USING 'XXXXXXXXXXXXXXXXXXXXXXXX'
      IF counter=9 .OR. counter=17 .OR. counter=26
       STORE row+6 TO row
      ELSE
       STORE row+5 TO row
      ENDIF
      STORE counter+1 TO counter
     ENDIF
    ENDCASE
    SKIP
ENDDO
@ row,5 SAY "     "
SET PRINT OFF
SET FORMAT TO SCREEN
SET TALK ON
SET EXACT OFF
RETURN
```

Part of the Revised dBASE II Command File:

```
SET MARGIN TO 1
SET FORMAT TO PRINT
SET PRINT ON
?? CHR(27)+CHR(56)
?? CHR(27)+CHR(69)
?? CHR(27)+CHR(51)+CHR(7)
SET PRINT OFF
@ 1,1 SAY "     "
WAIT
@ 6,10 SAY school
@ 6,55 SAY term
@ 13,8 SAY form
@ 13,12 SAY idletter1
@ 13,13 SAY idletter2
@ 13,25 SAY course
@ 13,36 SAY period
@ 13,45 SAY date
@ 17,15 SAY thissubj
@ 17,47 SAY teacher
USE students
GO TOP
STORE 26 TO row
@ 26,1 SAY "     "
SET PRINT ON
?? CHR(27)+CHR(51)+CHR(1)
?? CHR(27)+CHR(67)+CHR(34)
STORE 1 TO COUNTER
DO WHILE .NOT.EOF
   DO CASE
    CASE thisform = form .and. (idletter1 = id .OR. ;
idletter2 = id)
     IF thissubj $ subjects
      STORE TRIM(name) TO prinname
      ? "          "+ prinname
      ? CHR(12)
     ENDIF
     STORE counter+1 TO counter
     ?? CHR(27)+CHR(67)+CHR(34)
     IF counter=5 .OR. counter=10 .OR. counter=15 .OR. ;
counter=20
      ?? CHR(27)+CHR(67)+CHR(36)
     ENDIF
    ENDCASE
   SKIP
ENDDO
?? CHR(27)+CHR(64)
?? CHR(27)+CHR(8)
SET PRINT OFF
```

⇨

```
SET FORMAT TO SCREEN
SET TALK ON
SET EXACT OFF
RETURN
```

* * *

A Simple MBASIC Preprocessor

by Brian C. Dugle

Several months ago, I wrote an article for the ***FOGHORN*** about using WordStar for writing MBASIC programs (Vol. IV, No. 11, August 1985). In it I mentioned that automatic numbering for a BASIC program was my next subject. Well, if you have been waiting for it, here it is!

This article will describe a BASIC program which reads an unnumbered source file and writes a numbered file from it. This would be pretty trivial if there were no **GOTO**s and no **GOSUB**s (either very unlikely or not very useful for programming in BASIC!), but we will handle conversion of named labels to line numbers as well. Further, we won't pass on any remark lines since program documentation will remain in the original unnumbered listing.

First, why MBASIC? One reason is that MBASIC programs are easy to work with. They can be debugged interactively (or even "hacked together"), and they are one of the more portable kinds of programs around. As an illustration of MBASIC's portability, I recently wrote a circle drawing program for an office at work that had the same printer as I do at home.

There was one difference though. Their computer is an IBM-PC, and mine is an Osborne! MBASIC on the Ozzy and BASIC on the IBM-PC both come from the same home (MicroSoft) and I took advantage of that fact. I was not doing screen graphics (obviously machine dependent), and there were a couple of differences (like clearing the screen), but 98 percent of the program ran the same on both machines. (I even took it in on disk courtesy of Uniform!)

So much for portability.

The other thing I find very useful with MBASIC is being able to add a **STOP** statement for debugging if I am having trouble. When the break message appears, I can easily investigate values of variables by **PRINT**ing them in immediate mode to find out what is causing the problem. Then, if there is no problem at that point, I can **CONT**inue.

BASIC leaves a lot to be desired in terms of structuring. The need for line numbers everywhere is absolutely a pain! You may be asking why I haven't switched to CBASIC 2 then? Well I have done some work with it but it is quite different from MBASIC and, in my opinion, almost the worst of both worlds for the casual programmer.

CBASIC is not interactive; each time a change is made you have to recompile. And, I have had some problems in getting things to work the way I thought they should. Someone with a more rigorous approach would undoubtedly avoid most of these problems.

So what is my answer? I think that those of you BASIC devotees who do not want to buy a copy of TURBO and learn Pascal should read on. BASIC will never be as clean-looking as the main block of a Pascal program, and NBR (the program we are about to write) must be run separately on the file just like compiling a CBASIC 2 program, but the advantages of writing a large program without line numbers makes it worthwhile.

The first step is to build your program from the top down. Now that sounds like I'm spouting the original programmer's buzzword, but I believe the top down approach is a fundamental requirement for getting a working program that does what you want done.

Top down means sketching a plan for doing the job in regular old English, then, with more detail at each level, explaining each step of the plan. While you are at it, why not do your sketching with WordStar in N (non-document) mode?

It helps to think a bit in terms of logical statements in sketching out your plan. Some key words that describe decisions that must be made and actions that must be taken in getting from start to end will be very helpful, but with the magic of WordStar, all things can be changed!

Once you have the problem and its solution described at the general level, you can then go to the end of the file and start describing the detail level procedures that were stated in a phrase or two at first.

The only problem with this is that you have done all this writing, but you can't use any of it because there aren't any line numbers in there! Well hang in there, because the point of this article is to use this technique to write a program that solves the problem. The following is a sketch or pseudo code outline of a program which will number the lines of a program and convert labels to line numbers for us.

```
initialize variables
open program file
pass one
initialize the line counter
while not eof
    read a line
    if it is blank or just a remark, don't count it
    otherwise, save the line in an array
    if the line begins with a label, add the label
        and its line number to a list
    increment line number
end while
close program file
pass two
open output file
reset line number to start
for each line saved
    if it is a label line, make it a remark and print it
    otherwise add a line number at the beginning
    if it has a remark on the end, ignore that part
    look for labels in the line
    if found, look up in the list and replace with the
        appropriate line number
        keep looking at the line until there are no more labels
        add the line to the output file
        increment line number
    end while
    close output file
    print a list of the labels
    end
```

It doesn't look too much like MBASIC yet, but it has possibilities. And it will allow us to write future programs with WordStar, a much better idea than the old MBASIC line editor. It does not take much imagination or effort to translate the sketch above into the beginnings of a program.

[This first stage — NBR.ASC — is available on FOG library disk FOG/CPM.034. Joanne]

It took several steps to go from the first sketch outline to the listing in NBR.ASC, but the ability to change things globally, search throughout the listing, etc., is the key to making things much easier.

With no line numbers, major structural changes such as moving all the subroutines to the beginning (where MBASIC is reputed to find them faster) are easy to do with a block move in WordStar. Then (for this example) just add a `goto [start]` at the beginning and a label `[start]` where the initialization now begins, and run it through NBR again.

There may be something nagging in the back of your mind — like how do we get there the first time, perhaps?

I'm glad you asked!

The key to pulling yourself up by your bootstraps in this case is the little-used **PIP [N2]** parameter. Digital Research really thought of everything here. N2 adds line numbers to the front of each line of a file. From there, it is a manual operation to run through the listing (in WordStar non-document mode) once more to eliminate all blank lines and globally search-and-replace each label with its line number. Although it takes longer, I suggest not using the "without asking" option (**n**) on this one. That way you can leave the label where it belongs at the beginning of each routine.

The steps for this process are reasonable if you remember you no longer have to do this once you get the NBR program running! As the program is in the FOG library, you may not ever have to do it at all. But I will describe what I did anyway. First, use PIP to add the line numbers:

A> **pip nbr.num=nbr.asc[n2]↵** (↵ means the return key)

Now for a slightly sticky part. If you did have to type this program listing in and did it faithfully, you undoubtedly put colons at the end of many of the lines. These multiple physical lines are to be treated as a single logical line by the MBASIC interpreter.

To continue one logical line on the next physical line, the physical line must end with **^P^J** when in WordStar, or **^J** alone in MBASIC's own editor. You will see that WordStar indicates lines terminated by a line feed with a **J** in the status column on the right side of your screen as described in the ***FOGHORN*** August 1985 article.

These lines should be terminated with a line feed for MBASIC, but not for PIP's N2 mode. PIP will consider them all separate lines.

To get around this, I just ran through the file and eliminated the extraneous line numbers added by PIP while I was replacing the labels with their numbers. Optionally, you could leave all multiple statements on one physical line or just leave out the colons. The fewer line numbers you have, the faster the program will run, so compound statements are a good idea, within reason. (And besides, it is only for this one time anyway . . .)

This works fine until you get to some of those **IF THEN ELSE** statements. MBASIC uses the ↵ to mark the end of the block of statements that belong to the **THEN** or **ELSE**, so these must be on one line — physically or at least logically. You may run into a problem with total line length here, too — the resulting logical line is limited to 255 characters.

You may find, as I did, that you want to make a few global changes in the numbered version of the program.

This is not hard. First, SAVE the program in ASCII from MBASIC (**SAVE "B:NBR.NUM",A** — the **A** does it). Now you can edit the listing to your heart's content in WordStar **N** mode.

Changing line numbers, however, is a real pain! Corrections to variable names, syntax errors, and so on are easy this way.

However, in the copy of the file saved from MBASIC, the display of lines continued with a **^J** is strange — there is an extra blank line shown by WordStar after each one.

This can be fixed. The problem is that MBASIC adds a **^M**↵ after the **^J** that you inserted by itself in the file. WordStar displays this **^M** with a separate line that has a - in the status column, showing a ↵ without the normal **lf** (line feed) that follows most of the time. (WordStar does this so you can edit overprint lines.) So WordStar takes two lines to show **lf-**↵, but, as I said, you can fix it!

So, let's change all those **lf-**↵'s back to **lf**'s alone. WordStar will make global changes without updating the screen if you follow the final ↵ of the command with any other key. A **^S** works nicely, and the search and replace without asking is FAST when the screen is not updated. The actual change command is as follows. Note that WordStar will not repeat the ↵ or **lf** characters, but they are in there (**^P^M** zips the cursor to column 1 and **^P^J** sends it down a line):

```
^QA
FIND? ^P^J^P^M↵
                        <-- search for lf-↵
REPLACE WITH? ^P^J↵     <-- replace with just lf
OPTIONS? gn↵^S          <-- here is the ^S I was talking about
```

Without the **^S** you would probably not want to bother, the search and replace takes a LONG TIME! With the display update turned off and the whole program already in memory it is almost instantaneous.

One thing: normally if you follow a search or search-and-replace sequence with **^QP**, WordStar takes you back to the point from which the command was issued. It does not work with the **^S** option because the last character typed (the **^S**) is located at the end of the file as far as WordStar is concerned.

⇨

If you do want to return to your start point, use **^Q** as the speed-up character instead of **^S**. When the search-and-replace operation ends, you will be at the end of the file with a **^Q** (quick commands) action pending. Just hit the **P** key for a return to your previous location in the file!

Finally, a bit about filename conventions used in the program. I arbitrarily decided that the original unnumbered file should be **<progname>.ASC**, the product of NBR.BAS would be **<progname>.NUM**, and the symbol listing would be **<progname>.SYM**.

Once it is finally debugged, you should LOAD the <progname>.NUM file with MBASIC and SAVE it as a tokenized file, i.e., SAVE it without the **.A** option. The tokenized file loads much more quickly than an ASCII file. If you simply **SAVE "PROGNAME"** this last time, MBASIC will add the **.BAS** for you.

That just about brings me to the end of this article. This program could make use of some enhancements, and I encourage you to experiment and take it from here. In the interest of simplicity, I left this version of the program pretty basic, but one obvious addition would be to add a way to handle files too big to fit in memory. I did this with version 1.3 and am sending it along for the library.

Another useful modification would be an explicit "continue line code" that would allow writing the source with VDO, a small fast editor available from the FOG library — FOG/CPM.032, (mine is version 2A, I think). I use it for many things, but find the lack of true search-and-replace and block move functions somewhat limiting.

Even better, it would be nice to have the program compiled. I do not own BASCOM, so I cannot help there, but I'm thinking about writing it in TURBO to make it quick. You may note the display of memory remaining in the program progress lines — I used it to test various schemes to make the interpreted program run faster and left it in for your amazement.

The program does work on itself; that has been most of my testing of it at this time. If you find any bugs or have any individual questions, please contact me at:

6002 Carrindale Court
Burke, VA 22015-3623
(703) 569-3036 (hm ph)

[NBR.BAS is also on FOG disk FOG/CPM.034]

• • • • • • •

Date with dBASE

by Lloyd B. Fisher

One of the reasons that I like to use dBASE II is the existence of a "System Date". I am an old mainframe programmer and am used to the use of date functions in programming. Over the years I have become accustomed to use dates in the form: day, month (three letter abbreviation), year (e.g. 1986) as a sort of personal mark.

The following dBASE command file fragment extracts the system date from the dBASE II system and builds the needed elements for this kind of date. It also illustrates one method of performing array-like operations in the dBASE II command language.

```
*The following extracts the date which was stored when you
*entered dBASE II.
STORE DATE() TO DATE
*The following stores the month abbreviations in a manner
*which allows them to be picked off with the substring
*function ($(var,I,J)) in which,
*I = the number of letters (chAracters) to be selected
STORE ''JANFEBMARAPRMAYJUNJULAUGSEPOCTNOVDEC'' TO MONTHS
*The following three statements separate the elements of the
*date into separate variables
STORE VAL($(DATE,1,2)) TO MNTH
STORE VAL($(DATE,4,2)) TO DAY
STORE VAL($(DATE,7,2)) TO YR
STORE MNTH TO MONTH
*Calculating the offset in the string MONTHS
STORE MONTH*3-3+1 TO MONBR
*Storing the alphabetic month abbreviation
STORE $(MONTHS,MONBR,3) TO MOALPH
*This creates a four character year string (e.g. 1985)
STORE STR(1900+YR,4,0) TO YEAR
*This is a typical print statement using these elements.
*It would have to be adapted to your use.
? DAY,MOALPH,YEAR
```

Obviously the date does not have to be printed in the same order that I use. Enjoy.

• • • • • • •

Proper ASM Structures

by Mike Neary

Have you ever wanted to create a short routine in ASSEMBLY? One that would complete the necessary procedures, and then return to the A0> prompt without a warm boot. Use the following example and worry no more about whether you have disturbed CP/M's environment.

```
ORG     100H
PUSH     B
PUSH     D
PUSH     H
```

your routine goes here

```
.
.
.
POP      H
POP      D
POP      B
RET
```

Normally you should NOT RETurn from a program. If you use the above procedure you will save the current environment that CP/M is using for itself, and the ↵ (carriage RETurn) will place you back to the A0> prompt without the annoying warm boot.

• • • • • • •

FOG MEMBER LIBRARY NEWS

Library Notes

by Jack Brown

This month we have introduced only two new disks. Not due to a lack of material, but to an overwhelming onslaught! We need your help. System #6 has many files on it that have to be checked out and uploaded with .DOC files and bug reports to the system. If you can use a modem, you can help too. Try as we might, it has been impossible to get caught up enough with the new material to finish up the old library reorganization.

Most of the material released on the FOG/CPM series disks are brand new programs, and we will keep releasing new programs while the old library is being whipped into shape. A new printed directory is not yet available, but disk files are being sent to the FOG RCP/M systems containing the latest releases (the same as appears in the ***FOGHORN*** each month). This disk will be available from the FOG office as FOG/CPM.LIB for those of you who want it. A new version of this disk will be released each month.

REMEMBER, when you order a disk from the FOG office, be sure to specify your disk format if you cannot read Osborne SSDD disks. To speed up disk order processing, all disks are shipped in Osborne SSDD format unless you specify otherwise.

-FOG/CPM.032: Editor programs for all CP/M computers

//CPM032	.DOC:	
/MAR/86	. :	
EDIT	.COM:	Small file editor/directory space program
EDIT	.DOC:	Documentation for EDIT
EDIT11	.CRD:	Quick help card for EDIT
VDE	.DOC:	Video Display Editor documentation
VDE13	.COM:	Generic CP/M version of VDE
VDO	.AQM:	Source code for original VDO for Osborne in assembler
VDO	.DOC:	Manual for original Osborne VDO
VDO-OVR	.ASM:	Customize your VDO25 for your terminal
VDO-OVR	.SUB:	Submit file to build VDO-OVR patched version
VDO25	.COM:	Latest version of VDO for generic CP/M
VDO25	.MAN:	Documentation for VDO25
VDO25	.NOT:	Latest info on VDO25
VDOC	.COM:	Customized version for Osborne 1 and Vixen
VDOC	.DOC:	Doc for VDOC (source in Z80MR available)
VINST11	.COM:	Terminal installation for VDO25
VTERM	.DAT:	Data file for VINST11

-FOG/CPM.033: Various CP/M utility programs

//CPM033	.DOC:	
/MAR/86	. :	
DA2	.COM:	Directory Attribute program reads/sets CP/M flags
DA2	.DOC:	Does directory with file sizes, etc.
DIRF3-S	.NOT:	Last minute note for DIRFILES (secure version)
DIRF36-S	.ASM:	Assembler source code for DIRFILES
DIRF36-S	.COM:	Creates data files of disk directory with descriptions
DIRF36-S	.NOT:	Note on DIRFILES V3.6 revision
DIRFILES	.DOC:	Makes descriptions of disk files
DUMPDIR	.COM:	Display disk directory by filename and allocation
DUMPDIR	.DOC:	Allows you to find pieces of files on your disk
DUMPDIR	.MAC:	Assembler source for DUMPDIR
LDIR23	.DOC:	Directory program for .LBR and .LQR files
LDIR23	.MAC:	Source for LDIR23 (requires SYSLIB3)
LDIR23	.SUB:	Submit file to assemble and link
MATCHF	.REL:	LDIR23.MAC include file
MYSORT	.REL:	LDIR23.MAC include file
NULUFIX	.ASM:	Bug fix for NULU15 on FOG/CPM.016
SDRU1	.MAC:	Include file for SETDRU.C
SDRU2	.MAC:	Include file for SETDRU.C
SETDRU	.C :	Source for SETDRU in C80
SETDRU	.COM:	Allows calling overlays from other drives/users
SETDRU	.DOC:	Attaches itself to program or stand alone
SETDRU	.REL:	Assembled version for use with M80
UNSETDRU	.C :	Source in C80 for UNSETDRU
UNSETDRU	.COM:	Removes SETDRU when needed
USQBASE	.REL:	LDIR23.MAC include file

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Have a Donation?

FOG is a non-profit, tax-exempt corporation. All donations qualify for tax deductions. Find a home for that old hardware, the books or magazines you no longer need. Manuals are especially appreciated because they make it possible to help other users.

If you have time available and can come to the office, we have lots of jobs waiting. There is software to test, documentation to write, filing, questions to answer, disks to copy, and much more!

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Novice Notes for the Osborne 1

In a cold boot; at the `Insert Disk` prompt, try entering " (double-quotes), instead of a ↩. This causes the Osborne to boot from drive B instead of drive A. From that point on, however, Ozzy thinks drive B IS drive A and vice versa!

Jim Holmes

• • • • • • •

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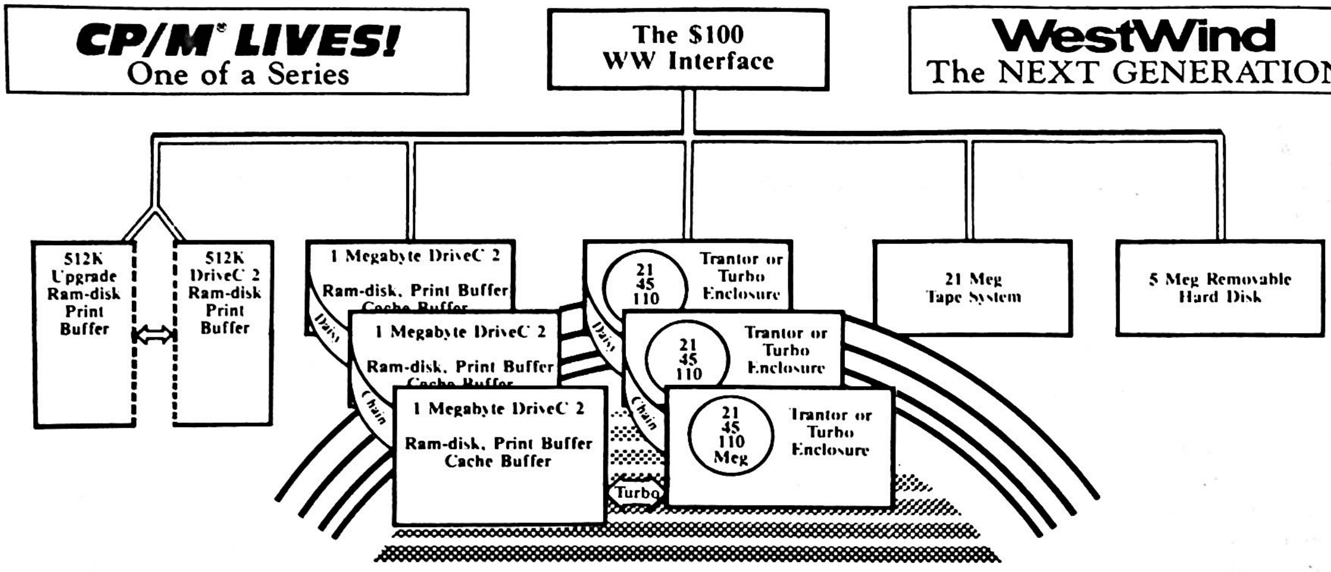
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OSBORNE 1

Computer Saver Fan from TOROCOMP

by Dave Hardiman

The Computer Saver Fan from TOROCOMP P.O. Box 1055 El Toro, CA 92630, is advertised as a remake of a popular fan advertised for the Apple II computer.

The unit is approximately 1-1/2" high, 4" deep and about the width of the O-1 vent cover. The bottom plate which comes attached to the fan housing is made to slide into the O-1 case in place of the vent cover. The fit is snug to hold the unit in place and while it can be inserted backwards, it really only fits one way.

The installation instructions are simple and easy to follow. The power cable and the power connector for the O-1 come out the right side of the housing and both are attached to the housing with sturdy strain relievers.

Power to the computer and to two grounded AC receptacles also mounted on the right side is controlled by a lighted rocker switch on the left side. TOROCOMP advertises that the unit contains EMI filters, but I am unable to test for that.

The unit is very quiet and provides adequate airflow. My O-1 is on eight hours a day and neither the case nor disks get warm. It's been a long time since I've heard from the arch villain, BDOS.

The grey housing matches the O-1 in color and blends in nicely with the shape.

For those who finally gave up on the Exec fan, this unit will fit the Exec as well. I have made several "home brew" fans for the O-1, and while they did the job, none were as quiet, convenient, or as good looking as the TOROCOMP Computer Saver Fan. At $49 plus $3 shipping and handling, it is an excellent value.

And when you place your order, step back fast. I mailed mine on a Friday, had a fan the next Friday.

• • • • • • •

OSBORNE 1

GOTCHA

by Jim Enright

Some time ago I purchased a Mannesmann Tally 160L printer. One of the things I wanted to do was write a screen dump program that would be a dot for dot reproduction of the Osborne 1 screen on paper.

The 160L does not have block graphic characters and the dot patterns or "Font" of the O-1 is not the same as the printer. This meant that I would have to, somehow, determine the dot patterns of the Osborne character set and use a table containing the dot patterns in my program to send to the printer in the dot graphics mode.

There is a 2716 EPROM (Erasable/Programmable Read Only Memory) in the O-1 that contains the dot patterns for the character set. Page 24 of the O-1 technical manual, Figure 5.3, shows a table claiming to interpret the EPROM data. (The same figure appeared in the "original" ***Osborne Users' Reference Guide*** in a black three ring binder as Figure 8-2 Character generator encoding, but it never found its way into the blue manual.) This figure is shown below.

```
Character represented
by this ASCII Code                 ASCII Codes
                       00 01 02 -  -  -  40 41 42 -  -  -  7D 7E 7F
Row  1:     0000-007F |__|__|__|__|__|__|__|__|__|__|__|__|__|
Row  2:     0080-00FF |__|__|__|__|__|__|__|__|__|__|__|__|__|
Row  3:     0100-017F |__|__|__|__|__|__|__|__|__|__|__|__|__|
Row  4:     0180-01FF |__|__|__|__|__|__|__|__|__|__|__|__|__|
Row  5:     0200-027F |__|__|__|__|__|__|__|__|__|__|__|__|__|
Row  6:     0280-02FF |__|__|__|__|__|__|__|__|__|__|__|__|__|
Row  7:     0300-037F |__|__|__|__|__|__|__|__|__|__|__|__|__|
Row  8:     0380-03FF |__|__|__|__|__|__|__|__|__|__|__|__|__|
Row  9:     0400-047F |__|__|__|__|__|__|__|__|__|__|__|__|__|
Row 10:     0480-04FF |__|__|__|__|__|__|__|__|__|__|__|__|__|
             \___.___/                     /\ ASCII 41 d = ``A''
             Row memory                   /  \
             Addresses                   /    \     Byte
                                        /      \    Address
                      / 041  01  |0|0|0|0|0|0|0|1| 0041
                      | 0C1  79  |0|1|1|1|1|0|0|1| 00C1
                      | 141  CD  |1|1|0|0|1|1|0|1| 0141
``A'' is encoded in   | 141  CD  |1|1|0|0|1|1|0|1| 01C1
  eight bytes as      | 241  FD  |1|1|1|1|1|1|0|1| 0241
  follows:--------)   | 2C1  CD  |1|1|0|0|1|1|0|1| 02C1
                      | 341  CD  |1|1|0|0|1|1|0|1| 0341
                      | 3C1  CD  |1|1|0|0|1|1|0|1| 03C1
                      | 441  01  |0|0|0|0|0|0|0|1| 0441
                      \ 4C1  01  |0|0|0|0|0|0|0|1| 04C1
```

I built an EPROM programming/reading device and used it a number of times to successfully read and program EPROMs. This device was connected to the Osborne parallel port and a program that I wrote was used to send and receive data from the EPROM.

When reading the EPROM, a table of EPROM data was left in the computer memory. All I needed to do then, was to write a program based on the information in the technical manual and leave an area in the program to contain the data from the EPROM. DDT could then be used to transfer the EPROM data into the area.

The "GOTCHA"

Whenever I performed a read operation on the EPROM removed from my O-1, the data obtained were all odd numbers.

⇨

This was inconsistent with information in the manual. I assumed the problem was due to my program or hardware used to read the EPROM. I felt I probably had an "Edge chasing problem" as happens often in digital devices.

I did not have the correct test equipment in my home shop to verify that this was true. After a lot of head scratching and modifying and remodifying my programming device, I was ready to throw the whole thing in the trash can.

I decided to take another look at the Osborne logic diagrams in the manual. I discovered that the least significant data bit for the character generator EPROM was not connected in the computer. This bit determines whether this number is even or odd.

In addition, when an EPROM is erased, all of the bits revert to the one state, thus if the least significant bits were not programmed, the numbers would all be odd.

When I took another look at the EPROM data, I discovered the layout of the characters was different from what the manual shows. (Compare the 1's in the figure from the manual and the actual representation of "A" on the screen as shown below).

My screen dump program now works. I hope this information will keep someone else from making a similar mistake. The following is a correction for Figure 5.3 in the technical manual:

THE ASCII "A" (041 HEX) IS ENCODED
IN TEN BYTES AS FOLLOWS:

```
                  Binary  Bits
             ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦*¦   * This bit not used
ADDRESS HEX  ¦7¦6¦5¦4¦3¦2¦1¦0¦
    041  01  ¦0¦0¦0¦0¦0¦0¦0¦1¦
    0C1  79  ¦0¦1¦1¦1¦1¦0¦0¦1¦
    141  CD  ¦1¦1¦0¦0¦1¦1¦0¦1¦
    141  CD  ¦1¦1¦0¦0¦1¦1¦0¦1¦
    241  FD  ¦1¦1¦1¦1¦1¦1¦0¦1¦
    2C1  CD  ¦1¦1¦0¦0¦1¦1¦0¦1¦
    341  CD  ¦1¦1¦0¦0¦1¦1¦0¦1¦
    3C1  CD  ¦1¦1¦0¦0¦1¦1¦0¦1¦
    441  01  ¦0¦0¦0¦0¦0¦0¦0¦1¦
    4C1  01  ¦0¦0¦0¦0¦0¦0¦0¦1¦
```

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The address of the first byte of each character is the same as the ASCII code. The other nine bytes are separated by 128 (7F HEX) bytes.

(By deleting the zeros in the diagram above, the capital A is perhaps a little easier to see occupying bits 2 through 7.)

```
                  Binary  Bits
             ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦*¦   * This bit not used
ADDRESS HEX  ¦7¦6¦5¦4¦3¦2¦1¦0¦
    041  01                ¦1¦
    0C1  79    ¦1¦1¦1¦1¦   ¦1¦
    141  CD  ¦1¦1¦   ¦1¦1¦ ¦1¦
    141  CD  ¦1¦1¦   ¦1¦1¦ ¦1¦
    241  FD  ¦1¦1¦1¦1¦1¦1¦ ¦1¦
    2C1  CD  ¦1¦1¦   ¦1¦1¦ ¦1¦
    341  CD  ¦1¦1¦   ¦1¦1¦ ¦1¦
    3C1  CD  ¦1¦1¦   ¦1¦1¦ ¦1¦
    441  01                ¦1¦
    4C1  01                ¦1¦
```

* * * * * * *

OSBORNE 1

More on the Blinking Cursor

by David Schor

Phil Pflager's note amending his patch to correct a cursor problem when using WSPATCH motivated me to try again! I had found the same problem after using a variant, WSPTCH33:. I would often find my blinking cursor off the screen when the text width exceeded 52 columns (on my O-1). He had suggested (June 1984 ***FOGHORN***) inserting the second line below in the "cursor blink routine" of WSPATCH.ASM:

```
          PUSH H
          CALL 0E7F6H
TIMSET    LXI D,0000H
```

Then in the November 1985 issue he noted that the patch didn't work on an O-1 with "the 80 column upgrade", but changing the `CALL 0E7F6H` to `CALL 0E807H` made the patch work properly for him on the upgraded machine.

I have an Osborne 1 with a Nuevo Double Density upgrade (but not 80 columns). Neither patch worked! I considered trying all addresses between E7F6 and E807 one at a time.

Instead I turned to the ***Osborne 1 Technical Manual*** and found the section on ROM/BIOS 1.4. Towards the end there is a section headed **AHSCRL** which (it says) does auto horizontal scroll if required.

The address along the left hand side was E7F6, corresponding to Pflager's first suggestion. In the second column there were other hex numbers.

I then loaded DDT, backed up a bit to E760, and looked for the same pattern of hex numbers. See below. For my setup (Nuevo says I have ROM 1.5 when I turn on my Osborne) the right call address was 0E79FH.

Here's what you do if none of these three choices works for you. With DDT.COM in your active drive, type:

DDT ↵ (↵ means carriage return)
-**dE760** ↵ (The hyphen is a prompt.)

I got:

```
E760 7E B7 28 0B DD 2A 5E E9
E768 DD 7E 00 34 DD E1 C9 1E
E770     <MORE HEX NUMBERS>
E778     <MORE HEX NUMBERS>
E780     <MORE HEX NUMBERS>
E788     <MORE HEX NUMBERS>
E790 DD 56 03 ED 53 5E E9 ED
E798 52 7D 32 6A E7 18 BB 3A
E7A0 68 E1 B7 C8 2A 5A EF 29
E7A8 3E 64 BD 38 09 3A 61 EF
E7B0     <MORE HEX NUMBERS>
E7B8     <MORE HEX NUMBERS>
```

The hex numbers in the middle, beginning with **3A 68 E1**, corresponded with the second column of hex numbers in the Reference Manual under **Auto Horizontal Scroll**. The address for that particular 3A is E7A0 minus one (hex), or E79F.

It worked! The WSPATCH now calls this routine when needed, and my cursor is always visible.

• • • • • • •

OSBORNE 1

MTBASIC Program for Echoing Console to Printer

by Tim Holtwick

This is a program in MTBASIC that makes your Osborne act like a typewriter. You do not need to use UNIX type redirection, and I have included a ruler line and five space tab capability.

It is not a difficult program, but it is useful for making your Osborne and printer emulate a typewriter.

```
10  ! THIS IS A PROGRAM TO ECHO SCREEN TO PRINTER
15  ! DEFINE VARIABLES
20  INTEGER CNTR
30  INTEGER L
35  ! CLEAR SCREEN
50  PRINT CHR$(26)
55  ! PRINT RULER LINE ON SCREEN
60  PRINT ''01234567890123456789012345678901234567890123456789O''
70  PRINT ''0         1         2         3         4         5''
75  ! TOGGLE PRINTER ON
80  POKE $E10C,$CD
82  ! INITIALIZE VARIABLES
85   L=0:  CNTR=0
87  ! START TESTING FOR KEYBOARD ENTRY
90   L=KEY
91  ! KILL UNWANTED RESPONSES AND IF NO KEY PENDING, REPEAT
92  ! ANYTIME A VALID KEY IS ENTERED, COUNTER IS AFFECTED
93   IF  L = 8  AND  CNTR = 0 THEN  GOTO 90
94  ! IN LINE ABOVE AND BELOW, DO NOT LET BACKSPACE GO BEYOND LEFT
    MARGIN
95   IF  L = 8  AND  CNTR > 0 THEN   CNTR=CNTR - 1: PRINT CHR$(L);:
     L=0
97  ! ON ENTRY OF ''ESC'' EXIT PROGRAM
100  IF  L = 27 THEN  GOTO 160
103 ! ON ENTRY OF LINE FEED DO NOT RESPOND
105  IF  L = 10 THEN  GOTO 90
106  IF  L = 11 THEN  GOTO 90
108 ! ON ENTRY OF VERT TAB ON ABOVE LINE AND FORM FEED
109 ! ON LINE BELOW DO NOT RESPOND
110  IF  L = 12 THEN  GOTO 90
115 ! IF DECIMAL IS AMBIGUOUS DO NOT RESPOND
120  IF  L = 0 THEN  GOTO 90
125 ! ON ENTRY OF TAB CHARACTER 9 ADD 5 SPACES
130  IF  L = 9 THEN   CNTR=CNTR + 5: PRINT ''     '';: GOTO 90
135 ! PRINT VALID CHARACTERS
140  CNTR=CNTR + 1: PRINT CHR$(L);
142 ! ON A CARRIAGE RETURN CHARACTER, START OVER
145  IF  L = 13 THEN  GOTO 85
147 ! OTHERWISE CONTINUE GETTING CHARACTERS AND SENDING THEM TO
     PRINTER
150 GOTO 90
155 ! DESELECT PRINTER
160 POKE $E10C,$C3
165 ! END OF PROGRAM
170 STOP
END
```

Once compiled, this program will run directly from CP/M as a .COM file.

• • • • • • •

OSBORNE 1

Fixing the Internal Monitor

by Eric Fredrickson

When the internal monitor on my O-1 began to go, the picture wavered in and out from the sides, sometimes disappearing into a vertical line in the center. The problem got progressively worse, then the monitor went out entirely.

According to George Edgar, computer technician extraordinaire, this is a common problem in the O-1 and some Executives and Vixens. The fault is a poorly soldered transistor — the Q103 horizontal output transistor. The solution is to resolder the three connections to the monitor board.

If you have the same problem, and have checked the main board for the video signal (by running an external monitor off an Exmon) and cleaned the video cable contacts, refer to the diagram for the points to solder.

• • • • • • •

KAYPRO

Networking on a Budget

by Alan R. Ostrowitz

It may come as a shock to many of you, but the truth of the matter is that some of the glamorous claims which you read about "networking" are at least as outrageous as the costs incidental to setting up a "real network".

The various claims made by manufacturers of networks are not, as yet, substantiated, (at least in my mind), compared with the very steep costs.

Yet, if you are using your computer in an office for real business purposes (aside from the short stints playing Adventure), you may find, as we did, that some form of primitive "network" is essential to avoid duplication of data base entries, and constant exchanging of floppy disks.

In an attempt to trim the costs of operating my own office, we found a very inexpensive way to "skin the cat", although the solution is not entirely foolproof. However, in the majority of cases, the following solution will do the trick without busting your budget.

Bear in mind that I am neither a programmer, nor a technician, so, if I could get may Kaypros to talk (to each other), so can you.

However, you will soon find that the limitations of this approach are substantial, i.e., only two machines can be "hooked together", and both machines CANNOT use different programs at the same time. In other words, when your host machine is being accessed by the terminal operator, the host machine will be "locked into" whichever operation the terminal operator deems fit. Both operators can view and work on the same program and the same file, but there is no "lock-out" feature. For a small office, this should not pose a problem.

The following "network" is not guaranteed to work with all software, although we have used it for the entire Perfect series, as well as dBASE II.

The expenditure for hardware/software should cost less than $50 and will enable you to "network" two machines only. By using a Kaypro 10 for your "host" containing data base and large file storage, and a Kaypro 2 for your "dumb terminal", you can avoid duplication of data base entries, and achieve large file storage capabilities at minimal expense. It is surprising just how useful a Kaypro 10 can be, acting as the "mainframe". Yet, at any time the Kaypro 10 can operate independently, just as it was originally intended.

The following are necessary:

(1) A copy of BYE.COM written by Mycroft Labs (the same people who have written MITE). (Also in the public domain and available from the FOG library.) Although the program was not necessarily written for networking purposes, it does allow you to set up one machine as the host computer and the other as the terminal while in a direct connect mode. I have not seen a public domain program which provides for direct connection, although it may exist.

(2) The copy of TERM.COM which came with your Kaypro, usually on the CP/M disk. It seems as if someone wrote TERM for use in a primitive network, without including the BYE program. Without the proper BYE program, there seems to be no good use for TERM.COM.

(3) The copy of BAUD.COM or BAUDM.COM, also on your CP/M disk.

(4) Two RS-232 connectors, which need to be configured to provide for a direct connection.

(5) Eight conductor cable.

Here is how to proceed:

(1) Wiring the connectors. Get some good eight conductor wire (we got ours from our telephone installer) and strip the ends. The plugs themselves can be purchased anywhere, and they have to be crossed, so that one machine is set up as a DTE unit, and the other is set up as a DCE unit. The technicalities of this escape me, but the mechanics are easy enough. Just cross the wires like this:

```
First Connector   Second Connector
      2      -------->    3
      3      -------->    2
      4      -------->    4
      5      -------->    5
      6      -------->    6
      7      -------->    7
      8      -------->    8
     20      -------->   20
```

You may need a little help determining which of the pins are which, but a careful reading of the MITE manual will do the trick. Just be certain to look at the pins carefully: what should be pin #1 usually isn't. Also, you might want to use connectors which don't need solder, as the pins are very small and you'd better be good with a soldering iron (and have very small fingers) to make the connections if you choose a solder joint. (Thanks to Bill Nauta of The Computer Store, Cranford, for his help in showing us how to configure the connectors. He also told me that this project would not work!)

(2) The Software. After the connectors are wired up, plug them into the two machines and place a copy of BYE on the disk you are using for the host machine, along with the BAUD program that came with that machine. The other machine will be used as the "dumb terminal", and you should place TERM.COM and BAUD.COM or BAUDM.COM on the other disk.

(a) BAUD.COM or BAUDM.COM. These programs have one function in life — to set the baud rate of the computer. As with any telecommunications, the Baud rates of both machines have to be the same. When both machines are wired together, you can set the baud rate at 9600. Just follow the prompts provided by the program, type **9600**, and the program will say "so be it" — Life should always be so easy.

(b) TERM.COM. Versions of this program vary from Kaypro model to model, but the function is the same — to make your Kaypro behave like a "dumb terminal". Just type **TERM** at the A0 prompt, and the program will tell you just what to do. Usually, nothing further is required than a simple ↵ (carriage return), to tell the host machine you are alive and well. After you type ↵, you should see the A0 prompt from within the other (host) machine, and you are now operating the other machine from your remote unit. When you are finished, or wish to disconnect from the host machine, you either type a - on the numeric keypad, or a **^D** (control D). The effect is the same — you disconnect from the host machine, and can then operate your machine normally.

(c) BYE.COM. This is a copyrighted version of similar programs which can be obtained free, but the one overriding advantage is that it provides for direct connect mode. At the A0 prompt on your host machine, set your baud rate to 9600 as above, and then type **BYE**, and follow the instructions. You can set the baud rate within the Bye program to 9600, and, when asked, type **C** for Direct Connect mode. You can also type in a password, if you feel like playing 007.

(3) Everything work OK? If not, check your wiring again, and then make certain that both machines are operating at 9600 baud. You should be able to operate the host machine from the "dumb terminal", as if sitting in front of it. If you are getting "garbage characters" through on the host machine, go back and reset the baud rates on both machines. If you don't even get "garbage characters", and you have checked your wiring, SORRY!!

When you are finished, and everything works as expected, you should place duplicate files of TERM.COM and BYE.COM on both machines. You may then switch back and forth, using one machine as the host, the other as the terminal, depending upon your particular needs. For example, one machine may be used for word processing, and have the printer attached, while the other may be used solely for data base operations.

(4) Finally. Having gone through the above successfully (we hope), you should have discovered that too many keystrokes are required to set up your baud rate and sign on into BYE, making the entire process time consuming. If you are lazy like I am, use the CONFIG program that came with the CP/M disk to permanently change the baud rate of your "network" disk, so you need not continually reset the baud rate of the machines, every time you turn them off. Just place your disk containing your "network" files in Drive B, type **CONFIG** and follow the directions to permanently change your modem baud rate. When you have finished, reset your machine (the little red button on the back) and the baud rate will be changed on the disk in your Drive B ONLY.

You may also discover certain other pitfalls, which we have found. Before you find them yourself, let me just mention a few:

(a) If you are using a keyboard redefinition program, you may find that it needs to share space within your computer's RAM with BYE.COM. We use SmartKey, and we found that it can be used with BYE, but it must be loaded AFTER BYE.COM.

(b) SUPERSUB.COM or SUBMIT.COM can be used to automate the signing on process, but, once you are inside the BYE program, neither of these programs will work. Another P-D program, EX or EX14.COM does operate inside BYE.COM but be very careful when using this program with BYE. I managed to wipe out a 30K file, never to be recovered again. I don't know what happened to it, where it went, or why it happened?

[Reproduced from an article for the KUGNJ CP/M Special Interest Group; Kaypro Users Group of New Jersey, Roosevelt, NJ 08555-0364.]

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KAYPRO

Arrow (and Numeric) Key Reediting

by Craig Brown

The use of the arrow keys (vector pad) has become almost second nature to me. Unfortunately, different programs use different definitions of these keys. I find it very frustrating to be (for example) writing a letter, run Perfect Filer from the word processor to look up an address and then return to the letter just to find that the arrow key definitions have changed. This means you have to exit the program (or at least save any changes), hit the reset button, and start all over.

Not liking to take the time to change all the disks around and then hit reset to get the proper key definitions loaded, prompted me to search out the locations in memory where they reside.

The program CONFIG that came with my machine is fine for setting the definitions on the disk, but they still don't take effect until the next cold start or reset.

I found that Perfect Filer (I don't know if the other Perfect series do this — I suspect they do) does change the definitions "on the fly" so to speak.

So after about the 200th time of cussing out the machine for not having the right definitions I sat down with DDT and hunted up the locations in memory.

I don't know if the method I used was the best or most efficient, but it worked.

I set the first and last arrow keys (up and right) to four character strings that were distinctive (*$~¦ and >/\<), reset the machine, and invoked DDT.

Then I started to display sections of memory (using the **D** command). Not knowing that much about the layout of memory I started at location 0, and worked my way up to 100h. This much I had learned: most programs start in memory at

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100h. So then I jumped to high memory (I didn't know really where to start — somewhere in BIOS or BDOS, wherever those were). At F000h I started displaying memory again.

Finally, with great skill and foresight (my names for luck), I found what I was looking for (I hoped!). There at location F661h was that string •$~¦ (don't ask how or why I used that), and just a few bytes away was good old >/\< (another of my mysterious brainchilds).

Now that I had an idea of the locations, I started playing with CONFIG and DDT, creating various combinations of definitions until I figured out how they worked (no guarantee this is right, except by experiment).

Each key has two areas of memory associated with it. The first (main) location is one byte long and contains the definition if it is one byte. If not then it is set to 00 and the second location (four bytes long) is used. On my machine, a Kaypro 4'84 running CP/M 2.2F the locations are:

Arrow Key	Main Location (hex)	Secondary Location (hex)
Up	F635	F661-F664
Down	F636	F665-F668
Left	F637	F669-F66C
Right	F637	F66D-F670

So, after all of this, you ask "So what?".

Well, one thing I am doing with this information, is to write a subroutine into programs that may use the arrow keys for cursor movement to define them the way I want them to be (saving programming to cover all possible combinations, which after a while gets ridiculous), and returning them to the original definitions prior to exiting.

Other ideas include short programs to define the keys for different applications on the same disk (writing documentation in Perfect Writer and program code in TURBO Pascal), defining them with common variable names for coding and a standard set for program testing.

The above holds true for the Numeric Pad also. I saw the locations when I was working on the arrow keys, and thought I would share them here also:

Numeric Key	Main Location (hex)	Secondary Location (hex)
0	F639	F671-F674
1	F63A	F675-F678
2	F63B	F679-F67C
3	F63C	F67D-F680
4	F63D	F681-F684
5	F63E	F685-F688
6	F63F	F689-F68C
7	F640	F68D-F690
8	F641	F691-F694
9	F642	F695-F698
-	F643	F699-F69C
,	F644	F69D-F6A0
ENTER	F645	F6A1-F6A4
	F646	F6A5-F6A8

These locations (arrow and numeric) may be different on your machine. As I said earlier, I have a Kaypro 4'84 running CP/M 2.2F. It would be best if you checked them out on your machine.

* * *

ZORBA

Modifying the Zorba BIOS

by Steve Antonoff

The Zorba computer utilizes a video controller chip which is capable of producing several video attributes: half intensity, blinking, reverse video and underline.

Unfortunately, the standard BIOS supplied by Modular Micros, Inc. prevents the use of these attributes by blocking the use of the most significant bit (msb) in the byte which is output to the video controller. It is this bit which sets the controller to receive the attributes, which are in the rest of the byte.

The modification to the BIOS which is described here enables the video attributes to be set through use of a new escape sequence, **ESC V**, which is followed by an ASCII character. The most significant bit of the ASCII character following the **V** is forced to a **1**, invoking the "set video attribute" mode. The remaining bits are used to set the attributes as described in the table below.

The modifications are Copyright © 1984 Steve Antonoff, Centurion Software Corporation, and are released for use in the Public Domain without warranty.

Video attributes are determined by the status (0 or 1 value) of bits in a (screen RAM) byte whose high bit is set, as follows:

Bit #	Bit Value	Function
0	1	Half Intensity
1	2	Blinking
2	4	Alternate character set
3	8	Unused – no effect
4	16	Inverse Video
5	32	Underline
6	64	Unused – ZAP it!
7	128	Forced to be 1 in HIBIT1.

Changes are required in three sections of the Zorba BIOS:

1. In the console output routine: CONOUT
2. In the code which executes the escape sequences, and
3. In the escape sequence definition table

Bit 6, is set to a zero to keep the video controller happy. With bit 7 always reset (zeroed), there is no possibility of the video controller getting a value greater than 127. With bit 6 reset the highest value that it can receive is 191 (the maximum value is 255 with all seven bits set).

Why should the video controller be unhappy if one or other of the high bits is not zeroed? It turns out that there are certain flavors it doesn't like! For instance, 241 makes it lose track of the screen coordinates, the screen is leftshifted two column positions and wrapped. This happens sometimes when the machine is cold booted and, as you'll have discovered, the only cure is to hit the reset button.

When inserting the following code in the BIOS, please leave the Copyright notice intact.

The only change required in the CONOUT section of code is to add a new label, CONOT8, to allow the new escape sequence to enter the routine after the most significant bit has been cleared.

```
        SUBTTL  CRT OUTPUT DRIVER
CONOUT: LD      A,C             ;save the character
        AND     7FH             ;make sure msb is reset
        LD      C,A
CONOT8: LD      (SCTMPB),A      ;if want to output to LST:
                                ;also
        LD      HL,(CSRPOS)     ;get current character
                                ;address on screen
        LD      A,(ESCFLG)      ;processing escape sequence?
```

The next change, inserted in the same general area as the other escape routines, actually implements the three character escape sequence ESCAPE V [char] (where [char] is a video toggle).

```
DIRC22: ADD     HL,DE           ;start of a line
        DEC     A               ;continue till P is set
        JP      P,DIRC22
        LD      (STRTLN),HL     ;save starting line address
        LD      A,(COLUMN)      ;get column position
        LD      E,A             ;calculate position into
                                ;line
        ADD     HL,DE
        LD      (CSRPOS),HL     ;save current character
                                ;pointer
        XOR     A               ;clear escape flag
        LD      (ESCFLG),A
        RET
;********************************************************
;This section of code is copyright (c) Steve Antonoff,
;Centurion Software Corporation. Please include this
;notice in your code.
;
;
        SUBTTL  HIGH BIT FOR SPECIAL VIDEO
HIBIT:  LD      HL,HIBIT1       ;address to process argument
        LD      (ESCJMP),HL
        LD      A,-1            ;make sure to set continue
                                ;escape sequence
        LD      (ESCFLG),A
        RET

HIBIT1: LD      A,C             ;get the character
        AND     3FH             ;only bits 0-5 allowed (bit
                                ;6->0)
        OR      80H             ;force high bit (bit 7) on
        LD      C,A             ;move char back to C for
                                ;CONOT8
        XOR     A               ;clear A to end escape
                                ;sequence
        LD      (ESCFLG),A      ;end the sequence
        JP      CONOT8          ;jump to CONOUT at CONOT8
        RET
;
;       End of Video Attribute Control Code
;********************************************************
```

The last change simply places the letter **V** in the Escape Sequence Table and defines the location to jump to in the event an ESCAPE V is used.

```
;       ESCAPE SEQUENCE MATCH CHARACTER AND ROUTINE ADDRESS
TBBDAA: DEFB    'A'             ;cursor up
        DEFW    CURUP
        DEFB    'B'             ;cursor down
        DEFW    CURDWN
        DEFB    'C'             ;cursor right
        DEFW    CURRIT
        DEFB    'D'             ;cursor left
        DEFW    CURLFT
        DEFB    'E'             ;home cursor & clear screen
        DEFW    CLRSCR
        DEFB    'F'             ;enter graphics mode
        DEFW    GRAPON
        DEFB    'G'             ;exit graphics mode
        DEFW    GRAPOF
        DEFB    'H'             ;cursor home
        DEFW    CURHOM
        DEFB    'I'             ;reverse index
        DEFW    REVIND          ;(cursor up, scroll down at
                                ;top)
        DEFB    'J'             ;clear to end of screen
        DEFW    CLREOP
        DEFB    'K'             ;erase from cursor to end of
                                ;line
        DEFW    ERELIN
        DEFB    'L'             ;insert line
        DEFW    INLINE
        DEFB    'M'             ;delete line
        DEFW    DELINE
        DEFB    'Y'             ;direct cursor addressing
        DEFW    DIRCUR
        DEFB    'l'             ;erase whole line
        DEFW    ERWLIN
        DEFB    'o'             ;erase: start of line to
                                ;cursor
        DEFW    ERSLIN
        DEFB    ''V''           ;enable special video
                                ;attributes
        DEFW    HIBIT
        DEFB    0               ;end of table
```

One final note: these video attributes are not compatible with WordStar due to the video controller chip. This chip, as it is used by the Zorba, places a blank on the screen wherever an attribute command is received. This is supposed to greatly increase the speed at which the Zorba can run, and I believe it.

The other method would require that the system check all of the video memory to determine which bytes should be sup-

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pressed. So, use this with BASIC or any other language to your heart's content, but until MicroPro comes up with a way to use this type of video display, WordStar and CalcStar are out!

About BIOS v1.8b

The COMPAT and FORMAT programs supplied with new BIOS, enable the Zorba to cope with 30 48 track per inch disk formats, and the BIOS was changed for compatibility with these programs.

This is not the only change however.

The other major enhancement involves the method that the Zorba uses to determine if a parallel printer is ready. In earlier versions of the BIOS the machine actually checked the wrong lead, and accordingly the printer had to be connected and switched on when the machine was cold booted. If the printer was off, or not ready, the processor would never acknowledge a printer ready.

This has been corrected in the new BIOS. I have frequently left my Okidata 92 switched off when I did need to use it, and now I can switch it on and have it jump to life immediately. Previously, I had to leave it switched on all the time, just in case I wanted to print anything.

This change could prolong printer life.

*[Reproduced from the **Oracle of ZEUS**, the newsletter of the independent Zorba Equipment Users' Society.]*

* * * * * * *

TRANTOR HARD DISK

Recovering from a Trantor Hard Disk Crash

by Jack Brown

One of the most frightening things to a hard disk owner is the dreaded BDOS ERROR ON A: BAD SECTOR message.

Now what? Have I lost my data? OF COURSE, I never backed up the disk lately, I mean, my disk won't give me any trouble. Will it?

Well, you can bet that the disk will run perfectly until you have something important on it that you have no backup for, then . . . It could be power problems, or a phantom glitch, or even just plain Murphy, but the chances are you will run into a problem someday.

I have been running a Trantor hard disk for over two years on my Osborne 1. It goes 24 hours a day, seven days a week as a bulletin board system. I normally log about 50 calls a day, and I use it myself for my own business (and my hobby!), so the disk gets quite a workout.

During that time I have had a couple of crashes (at the worst possible moment, of course), but have usually been able to recover my data with a little common sense and a bit of hacking!

Anyway, here is a brief rundown of what I did. I hope it will help you. For those of you who know the technical terms, bear with me. I'm going to try to use simpler English!

The Trantor BIOS loads into memory from your **A** floppy drive when you press return, then calls up the directory tracks on the hard disk (which the BIOS expects to be Drive A).

If you have an error on the directory track because of a power glitch or whatever, the system will give you either the BDOS ERROR message, or will just "hang" there with the floppy spinning and nothing going on!

Now it stands to reason that if you could get the BIOS to look at the floppy instead of the hard disk, you could get the BIOS to load, and maybe access the hard disk in another way. You could do this if you changed the assignment of the drives, but you would have to get the hard disk running to do so!

OK, so here is where the hacking comes in.

Get out your copy of EDFILE (FOG/CPM.020) or DDT and take a look at your BIOS file. It will be on your hard disk boot floppy called AUTOST.COM if you followed the Trantor installation procedure, or you will find it on the Distribution disk that came with your hard disk called DDBIOSxx.COM or DCBxx.COM. Use only a COPY of the program, not the original!

You will want to find two different locations. The first one is where the MENU program is called up (usually from Drive C). It is called C:MENU in the BIOS file.

You will want to change this so the system doesn't look for that file on Drive C (remember, that's the trashed hard disk directory!).

Just get rid of the **C:** and make it **A:** instead. You might also want to put in blanks instead of the MENU program call as well (that's 20 Hex if you are using DDT). This will just leave you at the A> prompt instead of looking for the MENU.COM program.

The second one follows very closely behind this location. Look for a series of numbers in hexadecimal starting with 80 81 00 01. This is the table where the drive assignments are stored. 00 and 01 are your floppies; 80 and 81 are the hard disk partitions.

What you want to do is switch these numbers around so the table starts with 00 01 80 81. Now your floppies are the A and B drives, and the hard disk partitions are the C and D drives.

Save this file (using **^W** [control W] with EDFILE or **SAVE** with DDT) and boot up your system with the newly modified BIOS.

If all has gone well, you will be greeted with the familiar A0> prompt from the Trantor BIOS, but you will be on the floppy.

Now FIRST use NSWEEP or PIP or some other program to get those important files off your hard disk!! This usually can be done at this point, so get them, quick!

Then use DISKMANAGER to fix your directory if you can. If all else fails, you can still reformat the disk and start loading all your programs back onto it again (AFTER you have made certain you have locked out any bad sectors on the disk using DISKMANAGER or FINDBAD).

If you have bad sectors on your directory tracks, Trantor has made it easy to shift your reserved directory tracks on the disk. Using TSLCNFG, specify a greater number of offset tracks rather than the default of two. This will move the directory tracks over further on the disk, ignoring the bad sectors on the previous tracks.

What we have done here is fool the BIOS into not looking at the hard disk at all when it boots up, but just loading happily with the floppy as the main drive. Since the directory of the hard disk isn't read, we got the BIOS to load properly. Now we can try to sneak past the bad sector on the disk. As long as the glitch is on another file (rather than the one you REALLY need) you have a very good chance of recovering it intact.

For those of you with the new Trantor BIOS Distribution disk, you can also perform this swapping of the disk assignments with TSLCNFG. Just use the menu option to reassign the disk partitions, and specify the floppies as A and B.

Armed with this info, you should be able to recover from some of your crashes, but the best remedy is to BACK UP your hard disk regularly.

* * * * * * *

OSBORNE EXECUTIVE

PRTSCRN — A Memory Resident Print Screen Utility

by Gordon Wilk

Abstract

PRTSCRN is a memory resident utility which provides the same function as the MS-DOS PrtSc (print screen) key; i.e., once loaded, pressing ^\ (control backslash) will print the screen to the list device. The program is specific to the Osborne Executive and will not run on any other system although it needs only one change to run on another CP/M3 system. It is available on FOG/CPM.038.

I have long been envious of the IBM PC's "Print Screen" key which allows the user to print the screen from within a program as well as from the command line. An early utility of mine (SNAP, submitted to the EXEC library) permitted screen dumps from the command line or by using the SNSP program as a subroutine within a user written program.

PRTSCRN provides the full function of the MS-DOS PrtSc key from almost any program accepting keyboard input.

Installation

The file PRTSCRN.COM as supplied will only run on the Exec with BIOS version 1.0 and the original ROM. If you have such a machine, you can run the program as-is.

If you have another version (the version appears on the screen after the CP/M+ sign on), have another ROM, or if you are not sure, use the INSTALL program to adapt PRTSCRN to your system. If you have the 1.0 BIOS and run INSTALL, no harm is done.

To Run INSTALL

1. Make a copy of PRTSCRN.COM under another name for safety.
2. Be sure INSTALL.COM and PRTSCRN.COM are both on one disk in the default drive.
3. Type **INSTALL** at the CP/M prompt.

Usage

Using PRTSCRN is a two step process — it must be loaded first, then can be used at any time until the next cold boot (System Reset).

To load the program type **PRTSCRN** at the CP/M › prompt or include it in your EXECST command line thus:

```
PRTSCRN ! WHATEVER
```

This will load PRTSCRN and then run program WHATEVER (WS, dBASE SC, etc).

To print the screen at any time once PRTSCRN has been loaded, just type ^\ (control backslash), being sure the printer is attached and turned on.

The ^\ may be typed while within another program provided that:

1. The program does not use RAM above D400 hex. Most programs written for CP/M 2.2 can run with a 56K TPA and so can live without using this area of RAM.
2. The program uses BDOS, not BIOS, calls for keyboard input. If PRTSCRN does not work at all with a program and the program does receive the typed ^\, it is probably using BIOS calls. WordStar and dBASE use BIOS calls.
3. The program will ignore ^\ when it is typed.

I selected ^\ because none of my programs make use of this character. If you wish to change it, change the "Marker" equate in the source code PRTSCRN.ASM and reassemble.

Theory of Operation

PRTSCRN is a resident system extension (RSX) which remains memory resident once loaded just below BDOS. It intercepts all BDOS calls and checks for functions two or six (console input); other functions are passed on without change.

If the call is for console input, PRTSCRN substitutes its own call and then intercepts the character returned. If the character received is not a ^\, it is passed back to the calling program. Control backslashes cause PRTSCRN to call the SNAP routine which prints the screen. The stack is restored and the character returned to the calling program which never knows what happened.

Only the ASCII characters are copied and printed, not the attribute bits in the high block. Thus dim, underlined, blinking and alternate characters will be sent to the printer as normal 7 bit ASCII.

Graphics will act as control characters and the result depends on the printer. Reverse video is sent through with the high bit set; on most printers they will print as normal characters.

The screen is copied using the BIOS interbank move routines which must be called directly not through BDOS function 50; additionally they use register HL so the usual methods of indirect call cannot be used. The address of the BIOS routines are hard coded in the program. The INSTALL program uses the usual techniques to find the addresses in the jump table and modifies the PRTSCRN program accordingly. INSTALL is a quick and dirty utility. It assumes that you are doing things right and makes no safety copy. Make a backup copy of PRTSCRN.COM before using INSTALL.

⇨

PRTSCRN executes as part of a BDOS 2 or 6 call. Since BDOS trashes all registers except the A register on these calls, I have not preserved them. Almost any program needing information from these registers will save them before the call.

Program Modification

The ^\ marker character is defined in an equate which may be changed without changing anything else in the program. Do not use a character likely to be used by the calling program. **^A**, for example is used by WordStar and those using WS-like controls.

To reassemble, use the following series of commands:

```
RMAC PRTSCRN
LINK PRTSCRN [OP]
REN PRTSCRN.RSX=PRTSCRN.PRL
GENCOM PRTSCRN [NULL]
```

PRTSCRN can be modified to run on other systems using CP/M3 by changing the screen bank and address in the source code and reassembling. The INSTALL program will do the other modification needed.

This program could be changed so that it modifies the BIOS jump table and intercepts BIOS function 3 (conin). This would allow it to work with programs that use direct BIOS calls. You would need to write another RSX to make the modifications after loading and a COM program to call and load the pair. The second RSX could be removed after it does its thing.

Program Extensions

Besides its obvious utility, PRTSCRN is a model of how an RSX may intercept keyboard input or console output to perform various functions. It is possible to use the "RSX Processor" section of the code as the core of a "SideKick" like desk accessory. It is only necessary to check for various other returned characters and branch to appropriate routines.

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OSBORNE EXECUTIVE & NEC 8201A PORTABLE

File Transfers Between the NEC 8201A & the Exec

by Ken Barbier

The article by Mel Hulse in the March 1985 ***FOGHORN*** (*NEC PC 8201A's . . . Making Them Talk to Ozzie Exec*, p. 75) helped me decide to purchase an NEC 8201A as a very portable extension to my Executive.

However, the cable configuration suggested in the article would not work for me. In addition to connecting pins 2, 3 and 7 on one end of the RS-232 cable to pins 2, 3 and 7 on the other end, I also connected pins 4, 5, 6, 8 and 20 in the same manner (i.e., 4-4, 5-5, etc.).

This configuration does not work using the UPLOAD function from the NEC's TELCOM program, but it does work using the BASIC program submitted by Fred Roberts in the October 1985 issue of ***FOGHORN*** (*File Transfer Between the Osborne 1 and the NEC 8201A*, p. 32). Here is the procedure:

Set up an NEC interface disk as described by Mel Hulse in his article: use COPYSYS to put CP/M+ on the disk, then PIP a copy of PIP onto the disk. Use SETUP to set the Baud Rate for the Printer Port to 19200, the Protocol to XON/XOFF, and the Device Selection to Other (AUXIN:/AUXOUT:).

Connect the RS-232 cable to the EXEC Printer Port and the NEC RS-232C Port.

To transfer a text (.DO) file from the NEC to the EXEC:

Type the WSUPLD.BA program from Fred Roberts' article into the NEC (line 60 has been changed for the EXEC):

```
5 REM written by Ken Barbier,
6 REM modified for 8201A by Fred Roberts
10 PRINT ''NEC PC8201 TO WORDSTAR''
20 MAXFILES=2
30 EF$=CHR$(26)
40 INPUT ''File to send: '';FI$
50 OPEN FI$ FOR INPUT AS 1
60 OPEN ''COM:9N82XN'' FOR OUTPUT AS 2
100 A$=INPUT(1,1)
110 PRINT #2,A$;
120 IF EOF(1) THEN GOTO 1000
130 GOTO 100
1000 PRINT #2,EF$
1010 MENU
```

Insert the NEC interface disk into the EXEC's A disk drive, load the system, and at the A> prompt type:

```
PIP d:filename.DO = AUX:↵
```

When the red disk activity light goes off, RUN the WSUPLD.BA program from the NEC and type in the name of the file you want to transfer (without the .DO extension).

The disk activity light should go on again; when it goes off, the transfer should be complete.

To transfer a file from the EXEC to the NEC (the directions given by Mel Hulse work fine):

- Select TELCOM on the NEC and set STAT to 9N82XN;
- Select the TERM mode. Make sure the HALF/FULL function (f2) is set to HALF.
- Select function key 5, DOWNload, and type in the name of the file you want sent to the NEC.
- Load the NEC interface disk into the EXEC and type:

```
A> PIP AUX: = d:filename[Z]↵
```

The file should appear, line by line, on the NEC's screen. After the file transfer has been completed, select function key 10 to return to the NEC's Main Menu.

• • • • • • •

The Inova 500 and WordStar

by Peter Cole

I am an Executive owner and I am very excited about my Inova 500. It has made life with WordStar a lot easier and a whole lot faster. My way of loading WordStar might be considered a little different, but surely you'll find some ideas of your own in my madness.

I have what I call a "Boot Disk". It is the only disk I use to boot up my Executive and it normally stays in my Drive A. The advantages are:

1) I only have to change one disk when I change my booting procedures, and;

2) With no CPM3.SYS on any of my other "special purpose disks", I can store more files on them.

I can do all of this and still have the capability to automatically load special function keys stored on my "special purpose disks".

My "Boot Disk" has all of my most used utilities on it. My WordStar "special purpose disk" contains all WordStar overlay files, including MailMerge, a spelling checker (from The Software Toolworks), and NSWP205.

The first thing I do every morning after I turn on my Executive, is to load into Drive B my WordStar Disk. Less than 45 seconds after I push ↵ (carriage return), I am looking at WordStar's Main Menu.

That is the last long wait for WordStar I have that day. Now, if I choose to leave WordStar I can always return in less than two seconds.

My "Boot Disk" is set up to automatically load SKEYS and RD. This is possible because the first thing the Executive looks for after booting up CP/M+ is a program called EXECST. The EXECST on my "Boot Disk" (created by MAKEST — on FOG/CPM.005) sends this command line to CP/M+:

```
A:SKEYS!A:RD 2!B:EXECST
```

See the September 1985 ***FOGHORN*** (page 55) for a description of what !'s are for. Notice that SKEYS and RD are preceded by **A:**. This is because I have configured CPM3.SYS to first search Drive C in the "disk search order" (if the program is in Drive C then it will load much faster).

"Disk search order" is described in the November 1985 ***FOGHORN*** (page 60).

Until RD has had a chance to create Drive C, any call to Drive C will be obnoxiously objected to by the BIOS. The last part of my command line (**B:EXECST**) is used to look on Drive B for another EXECST which has a command line specific to the purpose of the disk.

If there is no disk there, then CP/M+ gives me the option to return to the A prompt or to retry looking for EXECST on Drive B. I have also reserved one of my special function keys to enter **B:EXECST**. My WordStar Disk has this command line in its EXECST:

```
A:RD 2 RB!C:!ERA C:EXECST.COM!A:SYSKEY LB NF!WS
```

The **A:RD 2 RB** copies the entire WordStar disk into Drive C. The next command of just a **C:** causes the "default drive" to be Drive C. I must also warn you that WordStar has been configured to run on Drive C.

I used the WordStar INSTALL program to install the "WordStar Feature" of setting the "Default Disk Drive". My WordStar has also been "fast patched" using Inova's WSPATCH.

The command of **A:SYSKEY LB NF** requires that I first tell you what SYSKEY does. SYSKEY is a program provided with the INOVA 500 (but not documented) that allows one to read from the system tracks or write to the system tracks the special function key set and the two character font sets.

The **LB** says to load from Drive B and **NF** says with no fonts. Because these items are on the system tracks and not in CPM3.SYS I have erased CPM3.SYS on my WordStar "special purpose disk" to give me more room for other things.

Finally the command of **WS** loads WordStar. I then remove the WordStar Disk, insert my Data Disk into Drive B, log onto Drive B and start my editing.

* * * * * * *

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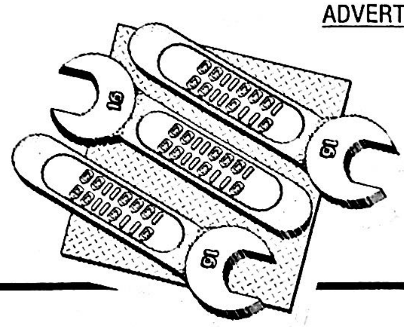

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By David E. Cortesi

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OSBORNE 1

Solutions for Some Osborne 1 Problems

by Ralph Totman

In the spirit of giving, which is so much the theme of the ***FOGHORN***, I would like to pass on these tips to others who may have had similar problems in the past.

Cooling Fan for the Osborne 1

To overcome the well known overheating problem in tan case Ozzies, I bought a 4″ muffin fan for about $26 (Can) from J&J Electronics, Box 1437, Winnipeg, Manitoba, R3C 2Z4. I installed it on top of the case, centrally at the rear, and cut a series of 1/2″ wide slots in the case across the 4″ circle over which the fan sits (with the internals removed from the case, of course!).

The fan housing is actually 4-1/2″ square and 1-1/2″ thick with a mounting hole at each corner, through which I fed hold-down machine screws 1/8″ by 2″ long. Cutting 1/2″ wide slots under the fan, rather than an open circle, leaves more of the internal metallizing of the case intact for shielding, and still allows plenty of air to flow through.

This done, I then found by experiment that the fan ran whisper quiet but still moved enough air if it received about 60 Volts AC.

This is quite easily obtained by using the center-tapped secondary winding of any old mains transformer from an early TV or radio, as an autotransformer, feeding 120V AC across the ends of the winding and taking off 60V between one end and the center tap.

All other windings should be carefully insulated.

The fan is virtually silent at this voltage and still keeps everything cool and working, even in midsummer.

Diskettes never come out hot and I have never had a heat-related problem since.

J&J also sells a 3″ muffin fan by Pentaflow for $24.95 (Can) which draws 200ma. The transformer sits on the desk beside the computer where I am careful not to place diskettes. The fan does not affect the screen of the internal monitor nor that of my external 12″ one which sits directly above the fan on a shelf and within 3″ of it.

All in all, this is a very satisfactory solution to a bad heat problem.

Drive B Head Overstepping

Occasionally when I fire up Ozzie, the Drive B will step across the diskette and then continue to click-click-click as if trying to reach a track beyond the end of its travel.

It doesn't seem to matter which program is making the disk access, or even if I am trying to boot the Drive B using ^" (control quote mark).

The solution I have found is to press the **reset** button when the head is about half way across the disk and then reboot in the normal way.

It has worked every time so far. When you suspect the overstepping is likely to occur, be ready to press the reset before the head gets to the click-click-click stage.

* * *

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Each November issue (No. 2) of the ***FOGHORN*** contains an index to the previous volume. We maintain a full inventory of back issues, either as individual issues or as part of a "Best of" issue. See chart below for prices.

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